



Population and Development in the Pacific Islands

Accelerating the ICPD Programme of Action at 15

edited by

Wadan Narsey, Annette Sachs Robertson,
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WordWorks Fiji (Seona Smiles, Barbara Hau'ofa and Frances Pene)

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Keynote Speakers

1. Dr Wasim Zaman is a development professional with over 30 years of program and academic experience. After his doctoral studies at Harvard University, he worked at the Kennedy School of Government and the Harvard Center for Population and Development. He has been UNFPA's Special Representative to Palestine, Country Director to Bhutan, and Chairperson of UNAIDS Theme Group for India and, subsequently, South Asia. He is a member of the Editorial Board of the *Asia-Pacific Population Journal* of the UN Economic and Social Commission for Asia and the Pacific. He is currently the Executive Director of the International Council on Management of Population Programmes (ICOMP).
2. Professor Wadan Narsey has a D. Phil from Sussex University. He has worked at the University of the South Pacific (USP) since 1973, lecturing first in mathematics and then economics. He served as USP's Director of Planning and Development from 1993 to 1995. From 1996 to 1999, he was Shadow Finance Minister for the Opposition in the Fiji Parliament. Professor Narsey has worked extensively in the region as a consultant economist to governments, and regional and international organisations. His areas of expertise are the financing of education, regional and international trade agreements, labour market and gender issues, and the quantitative analysis of poverty. He writes extensively in the media on development issues. He is currently Professor of Economics in the Faculty of Business and Economics at USP.
3. Dr Geoffrey Hayes, with a doctorate from the University of British Columbia, has taught at the University of Hawaii, the University of British Columbia and the University of Papua New Guinea. He also conducted research on Pacific communities while at the East-West Center in Hawaii, and Demography programme of the Secretariat of the Pacific Community. He has been a technical adviser on population and development for UNFPA offices based in Papua New Guinea and Fiji. His research interests include international migration and the relationship between population change and economic development, the impact of migration and remittances on small island communities, and the demography of Pacific Island countries. He currently works as a private consultant.
4. Dr Annette Sachs Robertson has a doctorate from the Harvard School of Public Health. She has taught community health, epidemiology and biostatistics at the Arabian Gulf University, the University of Hawaii, the Medical Officers Training Program (in Micronesia), the Fiji School of Medicine and the University of the South Pacific. She has been a technical advisor in Reproductive Health Programme Assessment and Operations Research and provides strategic direction to reproductive health programs in the Pacific in planning, monitoring and evaluation, and quality assurance of technical support and capacity development. She has provided technical oversight to numerous Pacific research projects in adolescent health, family planning and reproductive health commodity security. She is currently the Deputy Director of the UNFPA Pacific Sub-Regional Office.
5. Professor Richard Taylor graduated in medicine from the University of Sydney, trained as a physician and completed the course on Hygiene and Tropical Medicine at the London School of Hygiene and Tropical Medicine. While at Monash University, he began research on diabetes and cardiovascular disease in Pacific Island countries. He worked as an epidemiologist at the South Pacific Commission (now the Secretariat of the Pacific Community) in Noumea during the 1980s. He has worked at the University of Sydney School of Public Health and was Professor of International Health at the University of Queensland from 2005 to 2008. His international and national research studies currently include causes of death in the Pacific Islands and the Australian disaster response. He has written 365 publications, of which 190 are articles in refereed journals. He is currently Professor in the School of Public Health and Community Medicine at the University of New South Wales.
6. Dr Nii-K Plange, originally from Ghana, worked previously at the University of the South Pacific as Head of the Sociology Department and undertook research on a wide range of Pacific Island development issues. During this period he teamed up with colleagues from the Fiji School of Medicine for pioneering research work on sexual behaviour and HIV prevention and other social aspects of health and development. He later joined the UN and was the first UNAIDS Country Representative in Papua New Guinea. In 2006 he was reassigned to the UN headquarters in Geneva. He is currently the HIV and AIDS Policy Adviser for the AusAID HIV and AIDS Program in Papua New Guinea.

7. Dr Janet Fanslow has been engaged in violence prevention research since 1989. She worked with the Family and Intimate Violence Prevention Team of the US Centers for Disease Control and Prevention from 1997 to 1998. She is principal investigator of the New Zealand Violence Against Women Study, the largest epidemiological study on this topic yet undertaken. Dr Fanslow is author of the New Zealand Ministry of Health (MOH) *Family violence intervention guidelines: child and partner abuse* and co-author of the related MOH *Guidelines on elder abuse and neglect*. She also wrote *Beyond zero tolerance: key issues and future directions for family violence work in New Zealand*, a commissioned report for the New Zealand Families Commission. Dr Fanslow is currently a senior lecturer in Mental Health Promotion at the School of Population Health, University of Auckland.
8. Dr Gerald Haberkorn has qualifications in demography and psychology, and has worked extensively and published widely in the areas of social and economic development, policy analysis and general Pacific Island demography. He is a member of the International Union for the Scientific Study of Population (IUSSP) and the Australian Population Association. His current professional interest and passion is to bring good quality, timely, relevant and user-friendly development statistics and information into the public domain; to help facilitate and sustain informed debates on development; and to contribute to evidence-based decision-making at all levels of government, the private sector and civil society at large. He is currently Manager of the Statistics and Demography Programme, Secretariat of the Pacific Community (Noumea), where he has worked since 1993.
9. Professor John Connell has worked at the University of Sydney since 1977. He has also worked with the Secretariat of the Pacific Community (Noumea) and been a consultant to SPREP, ILO, World Bank and WHO in the region. He has worked on a range of development issues in the Pacific region, especially those relating to migration, and has published 20 books and over 300 papers. His most recent publication is *The global health care chain: from the Pacific to the world* (Routledge, New York, 2009). He is an unrepentant supporter of Leeds United.
10. Dr John Campbell is Associate Professor in the Department of Geography, Tourism and Environment Planning at the University of Waikato. His research interests are in natural hazards and global environmental change, especially as they relate to the Pacific Islands. More than a decade ago, well before international attention, he was researching and writing about the impacts of climate change on the vulnerable Pacific Islands, and the development policies required to adapt to them.
11. Professor Biman Prasad gained his PhD at the University of Queensland. He is Dean of the Faculty of Business and Economics at the University of the South Pacific, where he has worked for more than two decades, mostly teaching economics but also administering USP distance education programmes. He has written several books and numerous articles on economic development, trade and environment issues. He has done extensive consultancy work for international and regional organisations and governments in the Pacific region. He is an Associate Editor for the *Journal of Fijian Studies* and Chairman of the Editorial Board of the *Journal of Pacific Studies*.

Welcome speech

Professor Rajesh Chandra
Vice-Chancellor, the University of the South Pacific

I am extremely pleased to welcome you all to this three-day UNFPA/USP Symposium on Population and Development being held at the University of the South Pacific.

In 1994, an International Conference on Population and Development (ICPD) held in Cairo forged the ICPD Program of Action, a blueprint for integrating population, development and human rights issues for the next 20 years. 2009 marks the 15th anniversary of the 1994 ICPD and the drawing up of the comprehensive Program of Action. While several elements of the Program are also addressed by other international initiatives (such as the Millennium Development Goals) this year is an opportune moment for the UNFPA to assess the progress made since then, the current situation regarding all the goals and objectives of that 1994 Program of Action, and the challenges that lie before us in the Pacific.

We at the University were therefore extremely pleased and honoured that the UNFPA's sub-regional office in Suva requested the Faculty of Business and Economics at The University of the South Pacific to go into partnership with them, to conduct a three-day regional symposium to bring together relevant Pacific Island stakeholders (government representatives, community based non-governmental organisations, regional organisations, international agencies, research institutions and academics) with the very specific objectives of:

- a) assessing progress in the Pacific towards achieving the ICPD Program of Action
- b) consolidating the lessons learned
- c) identifying the remaining challenges
- d) formulating policy recommendations for accelerating progress.

I will not speak on the themes of this conference. I am all too conscious that two expert international practitioners in this field, Ms Nobuko Horibe and Dr Wasim Zaman, will be speaking in this opening session and will speak far more knowledgeably than I on the key issues.

I would like to note, however, that most of the themes of the plenary sessions are areas in which the University of the South Pacific, the premier tertiary educational institution in the Pacific for the last four decades, conducts research and consultancies, and also uses the relevant bodies of knowledge in its teaching at both under-graduate and post-graduate levels. Population and economic development, demographic transitions, urbanisation, climate change and adaptation, economic integration and labour mobility, data issues are all sustainable development areas, in addition to many others, where the University has promoted regional dialogue over the last three decades.

We have a Population Studies Unit in the Faculty of Business and Economics, although it has not had the buoyant student numbers we would have liked. A major problem is that, in the Pacific region, the labour market for population and demography experts is very thin. We all know that there are many areas where population experts are required, but vacancies are few and far between.

It is for this reason that few governments feel comfortable about giving scholarships in this area, in case they are blamed for not being able to provide the appropriate jobs to graduates in this field. In turn, students do not apply privately for these courses, as they also fear not being able to find a job afterwards. Because of this, we try to ensure that population graduates have other majors in their degree that increase their employment opportunities locally, regionally and internationally (which is probably why they are able to leave).

I am also told that we may be facing a very serious demography problem that could be on your agenda—the Pacific-wide phenomenon of aging demographers and few young replacements in sight! Perhaps this symposium may wish to consider how to encourage the professional development of demographers, especially regional economist demographers, and retaining them in the Pacific in the face of far more lucrative job offers internationally. The labour market for demographers is also a globalised phenomenon, with Pacific demographers joining the outflow of doctors, engineers, academics, teachers and nurses.

While many of our regional organisations are largely and very generously funded by donor countries and agencies, the University of the South Pacific is largely funded by our own member governments' taxpayers and private fees. Our revenue base is therefore extremely difficult to increase, especially in these very difficult times that our member countries and their citizens are going through because of the global financial crisis. In

recent years, the University Council has instructed us to rationalise our course and program offerings with required minimum numbers that constitute economically viable courses. As a matter of interest, if we had applied the current University-wide standards for required minimum student numbers that the USP Council has agreed upon, Population Studies may have been defined as an uneconomic program and been stopped. Because of the importance we place on population issues, however, and because we have managed to turn the University around financially, a special exemption for Population Studies (and also the related field of Official Statistics) was made. Regardless of the numbers enrolled in the Population Studies program, I assure this regional symposium that this program will continue to be taught at the University, simply because we recognise its critical importance to our member countries.

Nevertheless, I admit that it is difficult for us to attract quality staff since USP staff all pay tax on our salaries, which cannot compare with the very generous tax-free levels paid to staff in other regional organisations. Nonetheless, I believe that we now do have a very lean, efficient, financially transparent and fully accountable University. I believe that is also a major reason why the sub-regional UNFPA office had full confidence in totally entrusting to USP the funds which they allocated for the implementation of this symposium. I assure the UNFPA that these funds will not be used unwisely, and will be fully accounted for.

While we have committed quality staff to drive our teaching and research programs, I acknowledge that we could do with more assistance to boost the technical expertise in the program and also to boost student numbers.

In previous years, when I was Professor and Head of Geography (yes, I have also taught quite a few units in population and demography), the UNFPA used to take a very active role at USP. They used to fund one demography expert to help teach and conduct research, and they used to provide numerous scholarships for the Population Studies program.

I sincerely hope that, if the member countries and stakeholders attending this symposium think it worthwhile, they could request the UNFPA to reconsider a greater involvement with USP's Population Studies program and provide some kind of support for both teaching staff and student enrolments.

I am also mindful that there are other institutions in the Pacific that have been providing valuable services in this area of population and development. One such is the Secretariat of the Pacific Community with its PRISM database and training on official statistics. I would request the SPC to join with our USP Population Studies Program and the UNFPA in a Pacific-wide partnership to strengthen teaching and research for the greater good of the Pacific peoples in the areas of population and development.

I am assured that the Organising Committee's priority is not the presentation of purely academic papers (although they have their usefulness), but the delivery of people-friendly presentations that ordinary stakeholders and policy-makers can understand, and that you participants can understand and discuss, with the objective of producing clear guidelines on what our decision-makers should do next in order to improve the economic sustainability of our peoples and improve their standard of living.

I am assured by the Chairman of the Organising Committee (Professor Wadan Narsey) that there will be two publications arising out of this symposium. The first will be a monograph that brings together all the substantive presentations by the plenary speakers and the country papers that can be used as a reference point by expert stakeholders.

Secondly, and more importantly, there will be a very people-friendly publication that will summarise the conclusions and main recommendations of this symposium for stakeholders in participating countries, the UNFPA and USP. This publication will be broadly circulated throughout the region and guide policy-makers for the next few years.

While it is understandable that such regional conferences can simply become talk-fests, I would request participants to maximise this opportunity and come up with a strongly worded, substantive and meaningful communiqué at the end of this symposium. Should you also see the need to establish any regional initiatives that can continue the work in this area of population and development, I give you my assurance that The University of the South Pacific will be only too ready to facilitate your efforts.

Vinaka vakalevu, dhanyabaad and thank you.

Progress, challenges and priorities

Opening Remarks

Nobuko Horibe

Director of the Asia and the Pacific Regional Office, UNFPA

The United Nations General Assembly officially commemorated the 15th anniversary of the International Conference on Population and Development, commonly known as ICPD, on 15 October, 2009. This year, through various conferences, forums and meetings all over the world, we reviewed our progress and identified remaining challenges to implement the ICPD vision by 2015. We are undertaking this regional symposium to do the same for the Pacific in order to provide a solid basis for policy recommendations for accelerating progress in the region.

Having reviewed the symposium conference topics, I am confident we will meet this objective through the sharing of knowledge and experience, especially on neglected and emerging issues related to the ICPD agenda in the Pacific that require special attention.

Allow me to briefly take us back to Cairo 15 years ago. The Cairo Consensus is fully aligned with and provided much of the groundwork for the Millennium Development Goals, commonly known as the MDGs. While the two sets of commitments are mutually reinforcing, the Cairo Consensus did set a broad and comprehensive vision of development that included many elements not covered in the eight MDGs.

The Cairo Consensus is a plan for the people. It places individual human beings at the very heart of the development process. It argues that if the need for family planning and reproductive health care is met, along with other basic health and education services, then population stabilisation will occur naturally, not as a matter of coercion or control. It makes commitments for meeting those needs so that individuals can have genuine choices about spacing, timing and the number of their children. The plan also acknowledges the central role of women and young people in the development process.

The MDGs are derived from the Millennium Declaration of 2000 and are intended to intensify international efforts to eradicate extreme poverty and promote sustainable social and economic development. Many Pacific Island countries have adopted the MDGs as their own development goals or national development strategies. And I believe that almost all countries have prepared at least one MDG report and some are already working towards their 2010 progress report.

Although the MDGs did not originally contain an explicit reference to population or reproductive health, it was apparent at the outset that there was a close relationship between the MDGs and the ICPD. The MDG targets for maternal health, child health, and gender equality reflected similar, or identical, aims contained in the ICPD Program of Action (POA). On the other hand, the ICPD POA provides a wide range of recommended actions for governments that, in retrospect, would help to achieve the MDGs. As a simplified, goal-oriented framework, the MDGs focus primarily on a limited number of development results rather than actions. In this respect, the ICPD POA is more strategic in nature, and thus the two frameworks complement each other.

In 2005 the linkage between the MDGs and the ICPD POA became even closer when “universal access to reproductive health by 2015” was incorporated as a target under MDG 5 on maternal health. Three new indicators were added:

- adolescent birth rate
- antenatal care coverage
- unmet need for family planning.

Although the UNFPA has been taking the lead in implementing the Cairo Consensus, its scope and depth require the participation of a broad coalition of partners and actors, from grassroots non-government organisations (NGOs) to governments, academic and research institutions, regional associations and organisations, parliamentarians and international organisations. The UNFPA now wants to further broaden the ownership of the agenda and strengthen partnerships to accelerate ICPD implementation. A communiqué that will be adopted at this symposium will become the main guiding document for the next five years, but it does not end there; our commitment needs to be translated into measurable actions with necessary resources allocated. Action is what really counts.

Pacific leaders have had many meetings and dialogues, including the Forum Leaders Cairns meeting, the Foreign Economic Ministers' Meeting (FEMM), the Ministers for Health meeting, the Maternal Health Open Parliamentary Hearing held in New Zealand recently, and the meeting of the Pacific Parliamentary Assembly for Population and Development held in Cook Islands last week. The UNFPA, on our part, is making a conscious effort to address the issues raised in these discussions in our programs and advisory services to assist countries and Pacific people attain some of the objectives of the discussions.

I should now like to highlight key achievements and challenges, as identified in recent reviews on the implementation of the ICPD POA in the Pacific.

Progress and achievements

The regional population growth rate has declined from 2.3% per annum to 1.9%. Although emigration has contributed to slowing growth, the rate of natural increase has also declined by 20%. The projected population in 2025 based on the rate of growth around the time of the ICPD in 1994 was 13.6 million, but now the population is expected to be 12.8 million, 800,000 less than the 1994 projection.

Rising life expectancy since 1994 is evidence of improved standards of health. Reductions in infant and under-5 mortality have obviously contributed to this improved life expectancy. Furthermore, maternal mortality has declined in several smaller countries. Reproductive health services have been integrated into primary health services in most countries and the quality of service has improved through having better trained and culturally sensitive health personnel. Insensitivities observed among some family planning workers prior to the ICPD are much less in evidence today.

Services targeting adolescents through NGOs, schools, youth centres and specialised government clinics have greatly expanded. Along with other contributing factors, this has reduced adolescent fertility in some countries.

In terms of education, most countries have achieved universal primary education for both boys and girls. The gender gap is virtually eliminated at primary level and progress has been made on eliminating the gender gap at secondary and tertiary levels.

Studies and surveys have led to a significant improvement in the knowledge base on a range of reproductive health issues. Studies of gender-based violence in particular have highlighted the prevalence and pervasiveness of violence against women in the region and its socio-cultural and economic determinants. The studies have provided a stronger platform on which to mount remedial strategies.

Furthermore, male involvement in reproductive health issues has been advanced through pilot programmes within work and other predominantly male settings, such as sports, the police and the military. Nevertheless, this is an area that requires substantially more improvement.

In the policy area, the Pacific Policy Framework, developed last year at the Ministers' for Health meeting in Nadi, is being operationalised at the national level in the areas of reproductive health policies and programs, reproductive health commodity logistics management and family planning, and prevention of HIV.

New and stronger partnerships have been developed between international agencies, donors, NGOs and civil society to advance the ICPD agenda. The establishment of the Pacific Parliamentary Assembly for Population and Development (PPAPD) is a particularly important achievement.

In terms of financial commitment, the international resources available for population programs in the Pacific increased five-fold between 1997 and 2007, but the bulk of the increase was allocated to one country (Papua New Guinea) and was mainly for the purpose of HIV prevention.

In summary, progress has been made in the Pacific in achieving the quantitative goals of the ICPD POA and the MDGs in terms of the "number of countries" in the sub-region. However, the picture is less rosy if we look at individual countries. The countries that have made the most progress are generally those that are either in a historical relationship with a former or current metropolitan power or have opportunities to participate in overseas labour markets. For the vast majority of the population of the Pacific Islands sub-region, especially in the western Melanesian countries of Papua New Guinea, Vanuatu and Solomon Islands, which contain more than

three-quarters of the region's population, the situation is very different. They have made much less progress, mainly because the obstacles to broad-based development are so much greater.

Challenges

First, annual population increments in western Melanesia remain high and will continue to place pressure on governments to expand public services, such as health-care and education, at the expense of higher quality. Stabilising populations in western Melanesia would require a more rapid pace of fertility decline in order to reduce the rate of natural increase because emigration cannot play the role of offsetting the natural increase that it has played in Polynesia, Micronesia and Fiji.

Second, universal access to reproductive health is a long way from being achieved in the predominantly rural, village-based societies of western Melanesia, as well as some countries of Polynesia and Micronesia. Delivering services to dispersed, rural villages and islands is a major development challenge in the Pacific. The unmet need for family planning, especially contraception for young people, remains significant in several countries. Approximately 650,000 women have an unmet need for family planning.

Third, adolescents and young people in rural areas have limited access to information, services and counseling on reproductive and sexual health. Adolescent reproductive rights and sexuality remain culturally contested concepts in the Pacific. Cultural and religious sensitivities preclude wide access to and acceptance of the barrier method—the only realistic way to prevent HIV, other sexually transmitted infections (STIs) and unwanted pregnancies among young people and other marginalised and vulnerable groups. The prevalence of STIs is high, especially among young people, and HIV and AIDS have become epidemic in Papua New Guinea.

Fourth, maternal mortality remains unacceptably high in western Melanesia, especially Papua New Guinea. The vertical, fragmented and under-resourced nature of the various sexual reproductive health (SRH) and primary health care services reduces the ability of service providers to address key SRH issues in a holistic and coordinated manner. Also, as we all recognise, a mother dying during childbirth is a symptom of a bigger issue—the undervaluing of women.

Fifth, gender-based violence is persistent and pervasive in the Pacific and unacceptably high in countries where research has been conducted.

Sixth, sex workers, mostly women, are rejected from communities and remain at high risk of HIV, STIs and other SRH problems, in turn increasing the risk for the broader Pacific communities from which the sex-workers' clients and partners come.

Seventh, population ageing is occurring in those countries that entered the demographic transition and the pace of ageing will accelerate in coming decades. The implications of changing age structures in the Pacific have been insufficiently studied.

There are major gaps in the knowledge-base on population dynamics and processes in the Pacific. For example, much more research is required on the slow pace of fertility decline, the relationship between basic needs poverty and population dynamics, population patterns in outer islands, and the impact of emigration on the quality of life. Also, population data-sets (census, surveys, and household and income surveys) remain under-analysed.

Eighth, the integration of population dynamics into development plans, poverty reduction strategies and sector plans has stalled. There has been little evidence of progress in the past decade. Changing development frameworks, lack of technical support and waning donor interest are the main causes.

Finally, this year, the issue of climate change and its impact on population has received the attention it deserves. A person from Kiribati described a problem to a UNFPA staff member as follows: "If you have land and you know that the sea level is rising and affecting the land, eating it away slowly, you know that you have to do something, so you decide to move. But . . . you find that you have no other land to move to – either because you have no other land passed on to you or because on the other side of the land there is another ocean and you will be falling into the ocean." Climate change is added to the long list of challenges, and it has a special urgency and seriousness for the Pacific.

Priority areas

Looking at the progress and challenges, we need to ask ourselves whether the situation is drastically different from 1994 or 1998, when the implementation of the ICPD POA was last reviewed. Or is it the case that the unique geographic, socio-economic and cultural characteristics of the Pacific are impediments to the achievement of the ICPD goals and MDGs? The findings from recent reviews are similar to those from ten and fifteen years ago—slow economic growth, international and rural-to-urban migration arising from rural underdevelopment, high unemployment rates, high teenage pregnancy rates, high incidence of STIs, low government spending on health, growing urbanisation accompanied by the growth of informal settlements, and increasing signs of relative poverty. Progress did take place, but it is probably fair to say that it has been slower than might have been expected, or hoped for.

We need to strengthen our partnerships, use resources strategically and effectively, involve all levels of communities, and strengthen our capacities and networks to ensure our collective efforts are directed towards key agreed areas of focus, especially the four described below.

1. Reducing and removing traditional, cultural and religious barriers to equitable access to SRH services and information, through actively advocating among parliamentarians and faith-based and traditional leaders for their understanding and buy-ins.
2. Accelerating implementation of comprehensive regional strategies in reproductive health and reproductive health commodity security, encompassing and prioritising adolescent reproductive health and male involvement, with a stronger focus on the less-developed or poorer countries and the disadvantaged rural majority.
3. Repositioning or revitalising voluntary family planning in health and other sectoral plans and programs to reduce unmet needs, achieve further socio-economic development and fulfill basic human rights. There is a need to consider adopting and promoting a pro-poor approach to planning and programming for the service-delivery, and to make such services more accessible to disadvantaged and lower-income groups.
4. Increasing the provision of user-friendly adolescent SRH and HIV/STI services, counseling and information for young people, including those at most risk, ensuring that these services are non-judgmental, confidential, affordable and accessible. Condoms should also be promoted for family planning in order to link HIV/STI prevention with SRH services. Given the high percentage of young people in the Pacific, these actions should be considered a priority.

The UNFPA remains committed to ensuring that the rights of all women and girls are realised. We will continue to support initiatives for addressing the high level of gender-based violence in the Pacific.

The UNFPA also considers the full utilisation of census and survey data a priority, while ensuring that more countries conduct demographic and health surveys on a regular basis.

Plenary 1

Overview of population and development globally, ICPD at 15

Wasim Zaman

Keynote address

ICPD and the Millennium Development Goals

8

ICPD and the Millennium Development Goals

Wasim Zaman

In the 1990s, the world took stock of the global situation on several socio-economic fronts. During these years, many conferences were held and compacts signed. Recognising the huge differences in human development across and within countries, the United Nations Development Program launched the Human Development Report in 1990. It answered the question: Where is the world in terms of human development? In the same year, the UN World Summit for Children was held and formulated the Plan of Action. Then came the 1992 UN conference on Environment and Development held in Rio, which produced Agenda 21; the 1993 World Conference on Human Rights, which produced the Vienna Declaration and Program of Action; the International Conference on Population and Development (ICPD) held in Cairo in 1994; the 1995 World Summit for Social Development held in Copenhagen; and the 2000 Millennium Development Goals.

In an incremental manner, each of these conferences contributed to ensure the build-up towards the comprehensive response that is necessary to take the global village forward in tackling the problems that exist and moving towards a more sustained level of civilization. In a way, the Millennium Declaration (supported by its goals) was the most important signature of the nations to take the world forward.

Why did Cairo move the world? The 1994 International Conference on Population and Development (ICPD) in Cairo resulted in a new global consensus to focus on equality, human rights and empowerment of women and to integrate population dynamics into the planning process of both rich and poor countries.

The eight MDGs and their statistical indicators and targets have provided a universal framework for addressing poverty and under-development at the national level. Many developing countries in the Asia-Pacific region have adopted the MDGs as their own development goals and almost all countries have prepared at least one MDG Report describing their current level of achievement and their prospects for achieving the goals by the target date of 2015.

Reproductive health

MDGs did not originally contain an explicit goal for reproductive health. In 2005, Target 5b “Achieve, by 2015, universal access to reproductive health” was incorporated under MDG 5: “Improve maternal health”.

Undeniably, in the 15 years since the ICPD, much progress has been made towards the goals set in Cairo. Reproductive health and gender equality have become centre-of-the-table issues of rights in recent years. Today, the vast country of India has a Reproductive and Child Health Program, not a population control program. A huge job, but India has done it, although they still have a long way to go, especially in parts of India, such as Uttar Pradesh, Bihar and several other districts in what we call the underbelly of India.

More people now have access to sexual and reproductive health information and services than ever before. More women enjoy skilled attendance at birth, and maternal health has reached centre stage in the health care debate for developing countries. Today, too, adolescents are at the policy table; their reproductive health issues are a matter of concern and have begun to be addressed. Gender equality and policies against gender-based violence feature more than ever in the making and implementation of policies and programs.

Gender equality has progressed, although much remains to be done; there are still many lessons to be learned about how to mitigate or eliminate the sufferings of women in terms of their health care. Every year—and totally unnecessarily—more than half a million women die of causes related to pregnancy and childbirth. Too many girls still suffer gender-based discrimination and violence. In some societies, girls are eliminated before or soon after they are born. Too many girls are married off as child brides. Family planning is unfinished business. It would appear that there is more advocacy about women’s rights than realisation of them. Furthermore, counselling and services relating to reproductive health for men and boys is inadequate or absent, so they are not engaged. People are still excluded by gender or poverty, and special needs, based on geographic locations or cultural context, are not properly addressed.

To return to population and development, the controversy and the debate continue. Too many people, to simplify Thomas Malthus, whose ideas about population aroused a great deal of controversy in his day. According to

Malthus, technology and opportunity determine how many is many, and what the carrying capacity of the world is at a particular point in time and what it is in the long term. Today, some people are talking about what a threshold is, and what the optimal long-term carrying capacity is in the light of resources. There is even a charitable organisation based in London called the Optimum Population Trust, which aims to advance the education of the public about human population issues and their impact on environmental sustainability, and to promote research to determine optimum population levels.

The debate has not gone away as the reason for it is still with us. The situation is this: globally, there were 2.5 billion people in 1950, 6.7 billion in 2008 and, according to one projection, there will be 9.2 billion people by 2050. More than 80% of that population of 6.7 billion live in developing countries, and the projection is that this will increase to 86% by 2050. The Asia-Pacific region, including Australia and New Zealand, together account for about 4.15 billion people, and the Pacific Island countries 9.7 million. Africa, which had 9% of the world's population in 1950, will have approximately 21% by 2050.

The world is in the midst of a major demographic change which has become significantly visible. Across the world, growth rates are declining. For example, the overall growth rate of Asia was 1.8% in 1990 and 1.0% in 2009. In the Pacific, it has decreased by 10% in the last ten years and is currently 1.9%—double the rate of the Asia-Pacific region as a whole.

There are three categories of total fertility rate (TFR):

- a high TFR of 5% or more. There are 33 countries in this category, 29 of them in Africa, and the rate has changed little over the years.
- an intermediate fertility rate of between 2.5% and 5%.
- the near replacement level of fertility, approximately 2.1%, i.e. the so called magic number that leads to stabilisation of population. The TFR of half the world is 2.1% or close to it and an increasing number of countries are below this level.

This fertility decline over the last two decades has been seen by many as something to rejoice about. A recent issue of the Economist Magazine observed that "... worries about a population explosion are themselves being exploded" and even went on to add that this is a "... lesson on how to solve the problems of climate change"—an overstatement in my opinion.

It would be advisable to hold the euphoria in check since many developing countries in Africa, South Asia and the Pacific still have high fertility and growth rates. In addition, within many developing countries, there are areas with persistent high fertility. The progress in the decline of fertility rates has been uneven across countries. There are still 33 countries, mainly in Sub-Saharan Africa, with a TFR greater than five and a slow decline. In many countries, substantial differences in fertility levels between the highest and the lowest economic quintiles highlight the issue of inequity that persists in our world.

To celebrate falling fertility is like congratulating the captain of the Titanic on heading towards the iceberg more slowly. Modern Malthusians do have a point when they say that there are too many people in this world and the momentum of growth continues to add to the total in a big way—wave after wave. The absolute number matters most and that number is still rising in a significant way. Globally, approximately 2.4 billion people will be added in the next 40 years.

Countries of Asia are continuing their transition to a low-fertility/low mortality regime. While the developed countries have reached the final stage of the demographic transition, most developing countries are at the intermediate stage, except Afghanistan and Timor Leste which remain at the early stage and are characterised by high fertility and high mortality.

The fertility transition has been under way for several decades in Micronesia and Polynesia and, more recently, in Melanesia but it still has a long way to go. Several countries across the Pacific have a TFR between four and five, others have achieved a TFR of three, but only one (Palau) has achieved the replacement level of 2.2.

In most Micronesian and Polynesian countries, low population growth is not a result of having completed the demographic transition or having achieved population stabilisation. Rather, low growth has been achieved by emigration, while natural increase has remained relatively high.

The fertility decline has multi-sectoral determinants. The reasons for it, or for the lack of it, have been analysed at length by social researchers. Most commonly, two types of determinants of fertility are distinguished: social, cultural and economic variables, which influence decision-making regarding the number of children a woman or a couple decide to have; and biological and behavioural variables, often called proximate determiners, through which socio-economic variables operate.

One of the most important socio-economic factors correlated to the level of fertility is women's educational level. A high level of education is often associated with increased contraceptive use, which lowers fertility, but it is also associated with the reduced duration of breastfeeding, which increases fertility when contraception is not used. I bring this up to illustrate that fertility decline, or the lack of it, is not a simple matter but is the result of multi-sectoral determinants, all of which need to be addressed.

Family planning

Fertility decline in some developing countries has been phenomenal. The demographic transition that took place in such countries as Britain over a period of nearly 150 years has taken place in some countries in just 20 years—South Korea (1965-1985) and Bangladesh (the TFR dropped from 6 to 3 between 1980 and 2000). Even faster was Mauritius, where the rate was halved in just ten years, 1963-1973.

Much of the demographic transition in the Europe and North America took place without large scale government family planning programs, but the rapid fertility decline in so much of the poorer world would not have happened without family planning programs.

Family planning has been around for a long time, thanks to the influence of governments, civil society and organisations such as UNFPA, IPPF, WHO and USAID. The success of family planning programs globally has changed the world significantly, bringing both health-related and non-health related benefits.

Recent surveys indicate that in a number of countries the decline in the fertility rate has halted or has slowed. Moreover, even as contraceptive prevalence rates (CPRs) have risen, the unmet need for family planning remains high in many developing countries, including those in Asia and the Pacific. According to Malcolm Potts of Berkeley University, there are 80 million unintended pregnancies every year. In the Pacific Islands, moreover, CPRs remain well below the average for developing countries and in some countries the CPR has hardly changed in the past 20 years.

These trends have set off alarm bells during recent years. They are seen by many as obstacles to poverty reduction, and as contributing to the deterioration of the environment and to climate change. Moreover, they are also seen as hindering efforts to achieve other reproductive health goals, including reduction in MMRs and child mortality rates and stemming the spread of HIV/AIDS. For these reasons, a growing chorus of calls to reposition and revitalise family planning as part of the development agenda in the coming years have been heard.

Safe motherhood and maternal health – the neglected MDG

Despite all progress, the goals of Cairo remain as relevant as ever. Every year, more than half a million women still die of causes related to pregnancy and childbirth. Of these, 44% occur in the Asia-Pacific region. Most deaths to mothers and infants occur among the poor, and could have been prevented in known ways and with cost-effective strategies.

The three delays that cause most unnecessary maternal deaths are:

- the delay in making the decision to seek medical help (for an obstetric emergency)
- the delay in reaching a facility (due to distance and cost of transport)
- the delay in receiving adequate care due to shortage or absence of skilled staff.

Such delays are causing unnecessary deaths of women and making childbirth a time for punishment rather than rejoicing.

Globally, 13% of maternal deaths are caused by unsafe abortion but in parts of Sub-Saharan Africa unsafe abortion is responsible for 30% to 40% of maternal deaths. Preventing unintended pregnancies by addressing unmet needs for contraception among more than 200 million women is an essential strategy to reduce maternal

deaths and long-term disabilities related to pregnancy. One of the best development measures may be to provide good quality contraceptives and RH services to those millions of women who know they do not want more children.

Violence against women also contributes to maternal deaths. Most of these deaths are preventable through proven and cost-effective interventions but poverty, lack of information and remoteness are major impediments to obtaining services for many women. As the Executive Secretary of ESCAP, Noeleen Heyzer, pointed out recently: “Social exclusion, gender inequality, poverty, and violence all act as barriers to women trying to access health services, even when they are available”.

The ICPD Plan of Action suggested reducing maternal mortality rates to half the 1990 levels by the year 2000, and by half again by 2015. Improving maternal health is also an important MDG and related targets include: (i) the proportion of births attended by trained personnel and (ii) the Maternal Mortality Ratio (MMR).

The goal of reducing the MMR by two-thirds between 1990 and 2015 will not be achieved by many Asian and some Pacific countries (Asian Development Bank, 2008). At 490 maternal deaths per 100,000 live births, the South Asia region has recorded only a modest decline of 20% from the 1990 level of 620. South-East Asia ranks second in Asia with an average MMR of 300, which represents a decline of one third from the 1990 level of 450.

Countries with very high to high MMR in Asia are: Afghanistan (1,800), Nepal (830), Bangladesh (570), India (450), Bhutan (440), and Pakistan (320) in South Asia; Laos PDR (660), Cambodia (540), Indonesia (420), Philippines (230) and Timor-Leste (380) and Vietnam (150) in South-East Asia; North Korea (370) in East Asia.

In the Pacific, most of the Polynesian and Micronesian countries, as well as Fiji, have reduced maternal deaths to a low level, with some Polynesian countries not recording a single maternal death in recent years. The situation is, however, quite different in Papua New Guinea (MMR of 733 in 1994), Solomon Islands, Vanuatu (148), Federated States of Micronesia (140), and Kiribati (284).

Countries with the highest MMR also have the lowest percentage of births attended by skilled birth attendants. In South Asia, during 2008, only 36% of births were attended by skilled birth attendants, and it was much the same in 1990. Inadequate infrastructure and shortages of skilled attendants are two of the main causes of high maternal mortality. The countries of South-East Asia are much better off with nearly 75% of the births being attended by skilled birth attendants. Some of the countries of Asia which stand out in the reduction of maternal mortality through improvement of public services are Iran, Sri Lanka, Thailand, Malaysia.

In the Pacific Islands, several countries have had universal coverage for some time and two countries have already achieved the ICPD target of 90% attendance by skilled personnel by 2015. Kiribati currently falls short but with some effort could achieve the 2015 target. Papua New Guinea is unlikely to achieve this target.

A hard look at the health system and quality of services is essential to address maternal health, family planning and maternal mortality issues. The issue is the health of a girl or a woman and not just when the girl or the woman is going to be a mother looking at women as human beings and not as the custodians of procreation.

Adolescent reproductive health

There are large adolescent populations in most developing countries. If adolescents comprise about 30% of the Indian population then we are talking about over 350 million adolescents in India alone. Adolescents and young people need to be better informed and they need focused counseling and services for their sexual and reproductive health. Unprotected sex among adolescents exposes them to the risk of unwanted pregnancy leading to unsafe abortion and complications or death arising from it.

The teenage fertility rate (births per 1,000 women aged 15-19) is normally used to measure adolescent fertility. The ICPD POA stresses the need to “substantially reduce all adolescent pregnancies”. Teenage fertility rates remain high in many countries of Asia and the Pacific: Bangladesh (125 per 1000 women), Nepal (115), and Afghanistan (113). The lowest rates are in North Korea (1) and China (8) and are approaching low levels in Malaysia (13), Myanmar (16), Vietnam (18), Iran (20) and Sri Lanka (25). It should be noted that, in most Asian

countries, teenage fertility occurs mostly within marriage and, as was indicated earlier, in most of these countries, social and cultural factors limit adolescents' access to reproductive health services, including family planning. This exposes them to early pregnancies that pose a high risk to themselves, the unborn and the newborn.

Available evidence indicates that a significant proportion of maternal deaths in Asia occur among adolescents and young women and that an important cause of these deaths is unsafe abortion. Teenage fertility in the Pacific Islands has historically been high relative to more developed regions, but in recent years several PICs have experienced declines of 20% to 40% since the 1990s.

Population and economic growth

The relationship between population growth and development has been an area of great debate. Early views, led by Malthus, asserted the negative impact of population growth on income, at least in the short term, since it overwhelms natural resources as well as reproducible resources (such as infrastructure and capital). In the mid 1950s, development economists started to pay attention to the work of economic demographers, such as Coale and Hoover's 1958 analysis of India. During the 1960s and 1970s bilateral and multilateral development agencies, including the World Bank, started to invest in family planning programs as a way to control population growth, which was seen as an obstacle to economic development in poor countries.

By the mid-1980s, as fertility decline was well under way in parts of the developing world, views on population and development were varied. Led by a major publication of the US National Academy of Sciences, a sort of population neutralism was highlighted. The general conclusion at that time was that "the connections between population growth and development are complex and difficult to measure quantitatively. Through adaptation and substitution, markets may reduce adverse effects."

Notwithstanding these controversies, a common consensus emerged around the idea that rapid population growth may exert constraints on countries and regions at low levels of socioeconomic development. On the basis of empirical findings, the World Bank estimated that a population growth rate above 2% per year could slow the increase of incomes in poor countries.

More recently, the effects of changes in population age structure and dependency ratios on economic development have received much closer attention. A rapid decline in fertility reduced the dependency ratios between generations and boosted the share of the potential labour force. However, changes in the age structure can only be exploited when they are accompanied by adequate investments and sound public policies. Additionally, this demographic dividend is an opportunity that must be seized over a relatively short term before population ageing sets in (Bloom, Canning & Sevilla, 2003).

A second dividend based on possibilities of "powerful incentives for accumulating assets" in view of extended periods of retirements is also being talked about (Mason and Lee 2006).

Poverty and inequality

The impact of fertility decline on poverty reduction has been difficult to establish. However, recent research findings suggest that fertility rates have an important bearing on poverty. It may also be noted that implementing more effective reproductive health programs in high fertility countries will target countries where poverty is greatest.

A billion people still live in abject poverty. The world continues to suffer from persistent injustice and inequality. Unfortunately, the Gini Coefficient (which measures inequality in a given population) is almost a forgotten measure. An unbridled search for profit became the way of the world. No country, with the exception of a few oil-rich states, has risen from poverty whilst still having high fertility rates—which also impact directly on levels of maternal and child mortality and morbidity.

Poverty reduction is an important Millennium Development Goal and rapid economic growth is central to poverty reduction, as evidenced by the low incidence of poverty in the more advanced countries of the region. The pockets of poverty seen in these countries are due mainly to the mal-distribution of income. However, available evidence suggests that the declining incidence of poverty in Asian countries is also closely correlated with reductions in fertility and population growth, advances in education, improvements in health, increasing urbanisation and the greater participation of women in economic activity.

Worldwide, the percentage of people living in extreme poverty (less than US \$1.25 per day) has declined, but much of this improvement is due to the remarkable economic gains made in China, where the poverty rate fell from 80% in 1980 to 17% in 2005. Poverty reductions in other developing countries were partly or fully offset by continued population growth. Most of the world's population growth is taking place in developing countries, especially in the 49 least developed countries where most of the population lives in extreme poverty.

Rapid population growth keeps large numbers of people in extreme poverty in South Asia and Sub-Saharan Africa. Poverty data from the World Bank show that in Sub-Saharan Africa, the percentage of people in extreme poverty started to decline around 2000 but, because of rapid population growth, the number of people in extreme poverty nearly doubled, from 212 million to 389 million. In South Asia the percentage in poverty declined more rapidly from 59% to 40%, but the number increased from 548 million to 596 million.

Poverty reduction has not been a major feature of development planning in Pacific Islands until recently. The MDGs highlight extreme poverty, a concept that was believed not to apply in the Pacific Islands. For the MDGs to become accepted at the country level as a framework for development planning, the concept of poverty had to be re-cast as basic needs poverty, poverty of opportunity or poverty of access to basic social services, education and employment (Abbott, 2006). In theory, the relationship between basic needs poverty (BNP) and population dynamics is clear. Any list of basic needs would have to include the need for reproductive health services and family planning, along with access to education, occupational training, clean water and sanitation.

Lingering inequalities exacerbate the differences in the way the rich and the poor have access to health systems. Rich people, whose need for health care is often less, tend to consume most care, whereas poor people with the greatest of health problems consume the least. Public spending on health services most often benefits the rich rather than the poor in high and low income countries alike.

Hence a pro-poor approach (lower quintiles et.al) to the provision of basic services, including improving access to reproductive health/family planning services, should be a policy and program priority to alleviate poverty and improve the quality of life.

Poverty alleviation, or even going as far as its eradication, is much talked about, yet a very distant goal for our world of today. Our world remains very unequal.

Talent is universal but opportunities are not. Despite all the talk of equal opportunities, those without it are trapped in more serious ways than we are willing to admit. These days we often hear about Ponzi schemes that leave investors as victims. Our hearts go out to these victims. But the poor of our world are in a way trapped in Ponzis that are so entrenched and subtle that we live with them year after year and do little or nothing to change them seriously.

The world has made icons out of Amartya Sen (winner of the 1998 Nobel Memorial Prize in Economic Sciences for his work on welfare economics) and Professor Yunus (founder of Grameen Bank and, with the bank, winner of the 2006 Nobel Peace Prize) but their ground-breaking work of confronting poverty remains largely unused. We have become great advocates for ending poverty but have not actually made things happen in any significant way. Professor Yunus's world without poverty may well be feasible but the progress towards it is unacceptably slow.

Migration

As the most recent Human Development Report points out, migration often gets bad press. The negative stereotypes portraying migrants as 'stealing our jobs' or 'scrounging off the tax payer' are common press and public statements, especially during recessions. The reality is much more complex and different. While economic opportunities may be the prime cause of movement, there are also refugees of conflicts and environmental disasters. In addition, many social causes contribute to the movement of people.

Migration data are extremely weak, both for internal and international migration. While the world has been successful in globalising commodities and services, it has largely failed to globalise the movement of mankind. Ideally, transfer of labour from a location where it is surplus to one where it can be effectively absorbed would be most appropriate in the context of globalisation, but for political and other reasons, that clearly is not the case.

Historically, people have moved. There is plenty of evidence to show that “...population movements have played a vital role in the structural transformation of economies throughout history” (HDR 2009: 29). The world’s people are what they are today because of the movement of people. But in the 21st century, more than ever before, we are eager to stop people from moving, when the need for such movement seems to be so very important.

“Most migrants, internal and international, reap gains in the form of higher incomes, better access to education and health, and improved prospects for their children” (HDR 2009: 2). Migrants boost economic outputs, at little or no cost to the locals, and at the same time help their countries or localities of origin through remittances of funds and transfer of ideas and technologies.

Discussions on migration usually assume that overwhelmingly people move from developing countries into the rich countries of Europe, North America and Australia. Yet, as the HDR of 2009 points out “... most movement in the world does not take place between developing and developed countries: it does not even take place between countries. The overwhelming majority of people who move do so inside their own country” (HDR 2009:1). One estimate suggests that approximately 740 million people are internal migrants—almost four times as many as those who have moved internationally. Among people who have moved across national borders, just over a third moved from developing to developed countries—fewer than 70 million people. Most of the world’s 200 million international migrants moved from one developing country to another or between developed countries.

International migration, particularly of the labour force, from and within Asia has increased significantly during recent decades. This is caused by income disparities and uneven opportunities between countries of origin and destinations; imbalances in the supply and demand for labour between them; and improvements in communication, transport and the increasing role of government and private agencies in the management of these flows. It was estimated that the total number of migrant workers deployed by selected Asian countries was 2.4 million in 2000, which is an increase of 1.4 million from 1990. This number is likely to have increased significantly since then, and scattered evidence does not indicate return migration of significant magnitude as a result of the current downturn in the economies of receiving countries.

International migration also plays a significant role in both the population dynamics and the economies of many Pacific Island countries. All the developing Polynesian countries have net outward migration, as do four out of five Micronesian countries. Fiji has also emerged in recent years as an important sending country for migrants to Australia, New Zealand, the USA and further abroad—including the Middle-East. International migration from some Pacific countries is therefore vulnerable to the global economic recession, particular from countries providing semi-skilled or unskilled workers on temporary labour contracts. Seafarers and temporary agricultural workers are two of the occupations likely to be affected in the coming years. A slowdown in recruitment of these occupations is likely to increase hardship in the Pacific—especially in the more remote islands with few other opportunities for wage work.

“Large gains to human development can be achieved by lowering the barriers to movement and improving the treatment of movers” (HDR 2009: 3). We should also note that human trafficking has become a thriving illicit trade, primarily fueled by restrictions imposed on movement and the violations of human rights.

The benefits of migration outweigh the fears about inassimilable foreigners. Yet national and international policies on migration are lacking to bring sanity and balance in this touchy debate. Such policies are important, since international migration will continue to increase in volume and complexity in the coming years. The future will also see skilled migrants moving to today’s sending countries as a result of increased opportunities in them.

Therefore, as indicated earlier, international migration will be an important factor in shaping the demographic, economic and social contours of Asia and the Pacific in the twenty-first century. It is imperative, therefore, that international migration is accorded high priority in the national development plans and priorities of Asian and Pacific countries in the future. Development partners, including the United Nations, have a major role to play in building a knowledge base on international migration and its impact on development and in promoting and facilitating dialogue among countries to recognise that international migration contributes to development of both sending and receiving countries.

Population, environment and climate change

There is a Chinese proverb: One generation plants a tree; the next generation gets the shade. The question is what trees are being left behind by our generation?

Easter Island in the Pacific Ocean is one of the most remote locations on the planet. The gigantic stone statues located in the Rano Raraku volcanic crater are all that remain of what was a complex civilization. That civilization disappeared because of the over-exploitation of environmental resources. Competition among rival clans led to rapid deforestation, soil erosion and the destruction of bird populations, undermining the food and agricultural systems that sustained human life. The warning signs of impending destruction were picked up too late to avert collapse. The story of Easter Island is likely to repeat itself for the whole globe if the existing signs of impending disaster are once again ignored in the Climate Change Copenhagen in December, 2009.

Every day, more populations are becoming vulnerable. The Maldives in the Indian Ocean, Kiribati and Tuvalu in the Pacific, and low-lying countries such as Bangladesh are very much at risk should the sea level rise as projected by the Intergovernmental Panel on Climate Change (IPCC). People living in the coastal areas of many other countries would also be impacted by sea level rise should strong international action to combat greenhouse gas emissions not be taken soon.

More people are living on marginal land—population growth, poverty and inequality have pushed more and more people to the unbearable margins of civilization, where they should not be living in the first place.

There has been no dearth of warnings. In 1972 a book called *The Limits to Growth* created an international sensation. A group of (MIT) scholars, using system dynamics modeling, warned that population growth and natural resource use interacted to impose serious limits to industrial growth. The book provided several scenarios. At that time, the world's population and economy were comfortably within the planet's carrying capacity, but long-term scenarios and options were suggested. Over 30 years later, many of those options are no longer available. In 1992 the team updated limits to growth in a book called *Beyond the Limits*, in which the main challenge identified was how to move the world back into sustainable territory. A 30-year update in 2002 found the global society in 'overshoot' and foresaw social, economic and environmental decline. The update also observed that an ethical and cultural intervention may be the only way left to avert the worst effects of the inevitable end to physical growth on this planet.

This brings us to Mahatma Gandhi's famous comment on how many worlds India would need to develop industrially like Britain. With the current trajectory of growth, mankind would need several globes to exploit.

The concrete warnings of the IPCC should lead to more action than the pitched battle between the developed and developing countries.

Countries of Asia and the Pacific raised the alarm about environmental deterioration and sea level rise during the Fourth Asian and Pacific Population Conference held in Bali in 1992. The Bali Declaration on Population and Sustainable Development adopted at the Conference (United Nations, 1992) noted: "In many countries and areas, high rate of population growth and concentration have caused environmental problems, such as land degradation, deforestation, air and water pollution, threats to biological diversity from habitat destruction and rising sea level due to the green-house effect." This was further highlighted and expanded in the Conference on Environment and Development held in Rio de Janeiro in 1992.

The recommendations contained in the Bali Declaration and Agenda 21 are becoming more relevant today as the number of people whose livelihood, health and very existence are threatened by the continuing deterioration of the environment and changes in climate is increasing.

Efforts to understand the linkages between population, health and environmental change and to address the needs of those affected should, therefore, be on the agenda of development and humanitarian assistance for many countries in Asia and the Pacific.

It would be very sad if Barak Obama walked to the podium in Copenhagen in December empty-handed because the US Congress had robbed him of his courage to change the world. It would also mean that the unprecedented vote for change that the people of the USA gave last year is essentially meaningless.

Conflicts and emergencies

From the killing fields of Afghanistan and Iraq, army generals and other responsible leaders recommend that the long-term solution lies in education, health and the opportunity to earn an income. The socio-economics and demographics of the distribution of wealth, resources and opportunities may need to be looked into more seriously to deal with the root causes of violence.

A number of Asian and Pacific countries have gone through or are currently engaged in civil and military conflicts which have either displaced large numbers of people or have made it difficult for them to have access to basic services. The population affected by such conflicts is large and is increasing. A significant proportion of them are children and women, who are most vulnerable to abuse, including sexual abuse, and exploitation. Responding to their needs has stretched the limits—financial and human resources—of many countries and, therefore, must remain a priority for international development assistance.

There is plenty of evidence that high rates of population growth can contribute to potential for civil conflict, where they involve pressure on limited land or water resources, mass migration and high rates of youth under-employment. A report by the British All Party Parliamentary Group on Population, Development and Reproductive Health pointed out that, of the top 20 failing states, 17 have populations increasing at close to 3% a year. In five of these seven countries, women have an average of nearly seven children each.

Some countries of South Asia are probably amongst the world's most dangerous places to live in. Conflicts are ever present globally and post conflict rehabilitation seems to take much longer. Countries in Asia and the Pacific have also experienced a large number of natural calamities, such as volcanic eruptions, tsunami and earthquakes, that have displaced large numbers of people, rendered many homeless and caused death and destruction. The most recent example is the tsunami that struck Samoa on 29 September 2009, causing destruction of property and loss of life. The Indian Ocean tsunami that struck the region in 2004 wiped out entire villages in Indonesia, Thailand, India and Sri Lanka and made hundreds of thousands homeless. Another tsunami struck the north coast of Papua New Guinea in 1999, destroying villages and causing significant injury and loss of life. Devastating earthquakes have also hit Pakistan, Iran, India and Indonesia in recent years. Extreme weather events are also affecting Asian and Pacific countries periodically.

Funding and partnership for population and development

The 2009 MDG report (United Nations 2009: 29) notes that “Funding gaps are conspicuous for programmes needed to meet MDG 5, the goal towards which least progress has been made thus far.” The report concludes that “the strengthening and expansion of family planning programs can make a major contribution to improvements in maternal and child health, but require adequate funding and access to supplies. Yet, since the mid 1990s, most developing countries have experienced a major reduction of donor funding for family planning on a per woman basis” (United Nations 2009: 29). Funding enhancement for family planning, broader reproductive health services and gender equality are much needed.

Often these days I have heard people observe: “Asia has made it” and, citing the problems and resource needs of Africa, they add that it is time for donors to decelerate in Asia or quit it altogether. This view is extremely dangerous. Given the persistence of poverty and poor health conditions in Asia and the Pacific and the sheer numbers that are still involved, such a policy would be disastrous. By all means, address Africa's priorities but wishing away the persistent problems of Asia and the Pacific is certainly misguided and wrong.

Conclusion

Many Asian and Pacific countries still need a lot of attention when it comes to population and development work and support. Good governance and confronting corruption are huge issues for Asia and the Pacific. Yet progress and good governance do not mean much unless there is genuine justice, opportunities for work and access to essential services.

In the context of population and environment issues, it is also time for our civilization to think carefully about the course and direction of development. Fundamental questions of development—for who and for what end?—are coming up in a significant way. If the course and pace of development result in a world where there is more unhappiness and misery among the bulk of the people which will be handed on to future generations, then it is

certainly time to rethink development. To quote Mahatma Gandhi once again: “Speed is irrelevant if you are going in the wrong direction.”

The doom and gloom scenario is obviously overwhelming. However, let us not forget that mankind has overcome numerous challenges in the past. Today, many of those challenges are man-made. I conclude in the strong belief that “this too will pass” and the ability and goodness of our civilization will turn things around and leave behind for our next generation a legacy that they can be proud of.

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Plenary 2

Changing age structures, labour markets, public finance and poverty

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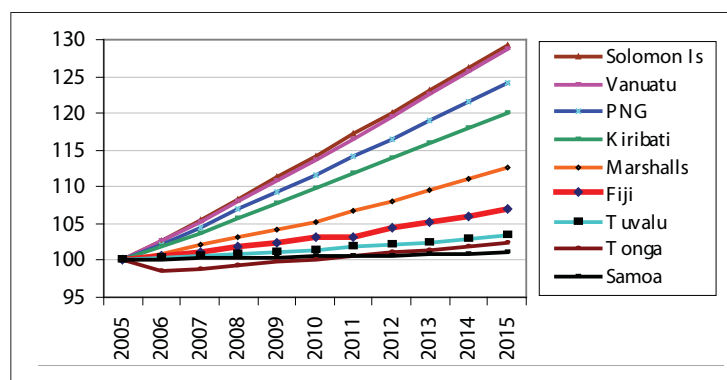
Changing age structures, education financing and poverty: how to put family planning back on the agenda

Wadan Lal Narsey

Pacific Island countries are a mixture of micro states with populations as low as just over a thousand (Niue and Tokelau); small countries with populations under three hundred thousand (most countries); Solomon Islands with 500 thousand; Fiji¹ with 830 thousand; and the largest of all, in a category by itself, Papua New Guinea with some six million (Table 1). In most geographic, political and demographic analyses of the Pacific, these disparate countries are grouped and distinguished as Melanesia, Micronesia, and Polynesia. While this categorisation is generally useful, the problems of population growth cut across these categories.

Nevertheless, the Melanesian countries generally have relatively higher population growth rates while their overall population density is only 15 per square mile. Their total population faces a high growth of 17% between 2007 and 2015, with Solomon Islands and Vanuatu facing 22%, and Papua New Guinea facing 19% (Figure 1). New Caledonia will see a smaller growth of 11% and Fiji only a 5% growth over this same period. Even amongst the Melanesian countries, the population pressures can be quite different.

Figure 1 Index Numbers (Total Population) 2005 = 100



Most Micronesian countries are atoll countries, virtually deficient in agricultural land resources and vulnerable to rising sea-level and natural disasters such as tsunamis. These countries have moderate population growth rates, averaging about 1.8% per year and expected to rise by some 15% between 2007 and 2015. With the limited land areas and rural-urban migration, those countries have extremely high population densities, posing great pressure on housing, water, sewerage and other public

utilities. Micronesia has a population density of 170 compared to 15 for Melanesia and 81 for Polynesia. These figures may be contrasted with 15 for New Zealand and three for Australia. Further population growth in Micronesia will pose severe developmental problems in addition to the long-term cataclysmic dangers posed by rising sea-level associated with climate change.

The Polynesian countries have a lower average growth rate of 0.7% per year, with a few facing problems of depopulation (Cook Islands, Tokelau, Niue).² Overall, the total Polynesian population is expected to rise by only 6% between 2007 and 2015. With the larger countries, such as Samoa and Tonga that are relatively well endowed with natural resources, population growth does not pose major problems.

Demographers looking at the phenomenon of demographic transitions typically use projections of fifty years or more. Unfortunately, given the typical life-time of elected governments, the implications of such long-term projections do not weigh heavily on politicians' minds. This paper, therefore, uses a much shorter projection period—from 2005 to 2015—in order to bring out the significant resource implications of demographic changes in the short to medium term, which political leaders cannot ignore. The data on the demographic changes which have taken place between 2005 and 2009 should also enable policy-makers to place the future requirements in the context of their most recent experiences.³

1. Any discussion of Fiji has to differentiate between the indigenous Fijians and the Indo-Fijians, who have quite different demographic characteristics.
2. This is partly due to their ease of access to New Zealand.
3. This paper uses the population projections given on the PRISM database maintained by the SPC. The author is grateful to the Bureaus of Statistics and their respective Government Statisticians in Fiji (Timoci Bainimarama), Vanuatu (Simmil Johnson) and Solomon Islands (Nick Gagahe) for making available their Household Income and Expenditure Survey data.

Table 1 Characteristics of Melanesia, Micronesia and Polynesia

	Population 2007	Estimated population 2015	% Change	Estimated growth rate	TFR	Population Density
MELANESIA	8137100	9553300	17	2.0		15
Fiji	831600	877000	5	0.7	2.6	46
New Caledonia	241700	269100	11	1.3	2.2	13
Papua New Guinea	6332750	7512300	19	2.1	4.6	14
Solomon Islands	503900	616900	22	2.5	4.8	18
Vanuatu	227150	278000	22	2.5	4.4	19
MICRONESIA	545900	629250	15	1.8		170
Federated States of Micr.	110600	115100	4	0.5	4.0	158
Guam	172300	211500	23	2.6	2.7	318
Kiribati	95500	110500	16	1.8	3.5	118
Marshall Islands	52700	58200	10	1.2	4.4	291
Nauru	9900	11800	19	2.2	4.0	471
Northern Mariana Is	84700	101150	19	2.2	1.6	180
Palau	20200	21000	4	0.5	1.9	41
POLYNESIA	649650	687700	6	0.7		81
American Samoa	65000	74000	14	1.6	4.0	325
Cook Islands	13500	12500	-7	-1.0	2.9	83
French Polynesia	261400	285400	9	1.1	2.2	74
Niue	1600	1300	-19	-2.6	2.6	6
Pitcairn Islands	50	n.a.		n.a.	n.a.	1
Samoa	179500	181100	1	0.1	4.6	61
Tokelau	1200	1200	0	0.0	4.5	100
Tonga	102300	106000	4	0.4	4.2	157
Tuvalu	9700	10000	3	0.4	3.7	373
Wallis and Futuna	15400	16200	5	0.6	2.6	108
TOTAL PICs	9332650	10870250	16	1.9		17
Australia	21000900	22397000	7	0.8	1.8	3
New Zealand	4183700	4457000	7	0.8	2.0	15

Source: SPC PRISM Database

Table 2 Economic and Population Growth Rates

	A :Average GDP growth rate 1990–2007	B: Average pop. growth rates 2009–15	A-B
Fiji	2.0	0.7	1.3
Kiribati	2.5	1.9	0.6
Marshalls	0.9	1.4	-0.5
Papua New Guinea	3.9	2.3	1.6
Samoa	2.4	0.1	2.3
Solomon Is	3.0	2.7	0.3
Tonga	1.9	0.4	1.5
Tuvalu	5.3	0.4	5.0
Vanuatu	3.8	2.7	1.1

Source: ADB database

Given the wide variety of rates of growth in total population, a very crude indicator of the ability of these PICs to cope with their demographic changes is given by their long term growth rates in gross domestic product (GDP) per capita. However, it is useful to break this down into the average growth rate of GDP and the average growth rate of population so as to disaggregate the influence of the two factors.

The first column of Table 2 suggests that, with most countries having less than 4% GDP⁴ growth per annum, none of them has

4. Tuvalu's average growth rate is somewhat of an anomaly, being based on windfall gains rather than any strong performance of the real economy.

had the really high growth rates that have been enjoyed by dynamic developing countries such as China and India. With less than 4% growth pa and adjusting for population growth rate (fourth column A-B in Table 2), there would be little leeway for them to improve their standards of living. Indeed, some of the countries (Solomon Islands, Kiribati, Vanuatu and Fiji) will be hard-pressed to cope with the increasing population.

The Melanesian countries in particular are extremely well-endowed with natural resources, yet, for a whole range of factors ranging from poor governance and civil unrest to inappropriate developments strategies, they have a history of poor economic growth and high rates of under-employment and unemployment. This has meant that, combined with rural-urban drift, their moderate to high population growth has resulted in severe population pressures on their standards of living, as expressed in their GDP per capita and in their housing, education, health, water and sewerage services. Yet, surprisingly, population growth has not been central to their regional and national agenda on population and development issues. This issue is addressed at the end of this paper.

GDP per capita growth rates are too crude an indicator of the impact of demographic changes on standards of living. The benefits of economic growth may not be distributed evenly—between rural and urban areas, whose populations grow differently and between richer and poorer households—while higher rates of urban growth than the population rates of growth may require major public sector investment in water, sewerage, roads, electricity and health services.

This paper attempts to show, using the impact on education financing requirements, that the population growth for some PICs is going to impose extremely heavy financial burdens on their public finance systems and governments. For others, there will be a real easing of public finance pressures, with the potential for economic growth to bring about improvements.

The analysis shows that, at the household level, families can enjoy better standards of living were they to have fewer children and, conversely, that larger household size tends to push households into poverty. Moreover, households with fewer dependents improve savings ratios and accumulation, assisting the second demographic dividend at the household level and at the national level.

It will be shown that it is important for national stakeholders in population and development policies to reposition family planning at the core of their strategies by using evidence-based research to establish the sound and significant benefits of family planning at national, community and household levels. Examples of such evidence-based approaches, both at the national and micro level using the education sector, are given in this paper.

Demographic dividends, support ratios and under-employment in PICs

Economists examining the impact of demographic transitions⁵ generally focus on the two demographic dividends that economies can enjoy because of the demographic transitions that can take place:

If Y = Income, N = Total population and L = Number of productive workers, then GDP per capita (Y/N) may be written as:

$$\frac{Y}{N} = \frac{L}{N} \times \frac{Y}{L}$$

workers per population income per worker
(support ratio) (productivity per worker)

The first demographic dividend is associated with workers per population ((L/N) while the second demographic dividend is associated with income per worker (Y/N).

Both demographic dividends depend on the reality that individuals in a population are either net consumers or net producers. Normally, from the time of birth to some age (usually 14 years of age or below) individuals may consume more resources than they produce; they are net consumers. Then at some age (usually 15 upwards), they tend to produce more than they consume, i.e. they become net producers, and at some elderly stage they become

5. See Professor Naohiro Ogawa, Chawla and Matsukura, and Andrew Mason and Sang Hyop-Lee.

net consumers again, although there is debate whether 60 or 64 is the more appropriate point of demarcation.

Demographers typically take 0 to 14 years and over 64 years as rough indicators of net consumers or dependents; and the 15 to 64 year-olds are assumed to be net producers. They then typically examine when the dependency ratio (the ratio of dependents—children aged 0 to 14 and people aged 65 and over—as a percentage of those aged 15 to 64) falls below 0.5 or, conversely, when the support ratio = [(15 to 64) / total population] begins to rise.

The long-term changes in dependency or support ratios provide useful indicators of the capacity of a population to support itself. However, such indicators may be extremely misleading for most PICs, especially the Melanesian countries, because under-employment and unemployment are so severe that dependency ratios or support ratios cannot give any accurate indication of the true extent of the working population. Hence, estimation of the first demographic dividend using support ratios, will severely over-estimate the ability of working age persons to create income and wealth.

Both indicators have problems for PICs. First, large proportions of the people aged 15 to 64 are not fully productive. Second, the growth in numbers of the working age population is not matched by actual growth in numbers employed. These two criticisms are especially relevant for Fiji, Vanuatu, Solomon Islands and Papua New Guinea.

In Fiji, the formal employment in 2004 was in the order of 122,000⁶ However, estimates derived from the national 2004–2005 Employment and Unemployment Survey (EUS) indicated that there were 198,000 waged and salaried persons, and employers, while the number aged 15 to 54 (excluding household workers) was around 350,000. With formal unemployment supposed to be only around 5%,⁷ the results from the 2004–2005 EUS indicated that large numbers of the so-called productive workers worked significantly fewer than eight hours a day and/or less than 240 days a year. The effective rate of unemployment, when all the under-employment was taken into account, was a very large 26%. Most of the under-employed people were actually disguised unemployment. Logically, then, while the support ratio may be indicative of the number of people capable of supporting children and the elderly, the amount of work being done by those aged 15 to 64 is not reflected by the pure numbers.

In Vanuatu, an even higher effective rate of unemployment is indicated (Table 3). A very large 62,000 subsistence workers are shown to be working an average of 20 hours per week.⁸ If the deficiencies to a forty hour week are aggregated and converted into effective full-time persons unemployed, then the national effective rate of unemployment is estimated to be around 40% of the 95,000 or so of the economically active.⁹

Table 3 Underemployment and unemployment in Vanuatu, 2006

Current work status	No. of persons	Aver. hours worked per week	Effective rate of unempl.
Working for pay/profit	23041	36	21
Family business/no pay	3098	29	40
Other work/no pay	4629	24	46
Subsistence	62043	20	44
Looking for work	2207		2
Economically active	95018	26	40

Source: Vanuatu HIES 2006

6. Annual Employment Survey, Fiji Islands Bureau of Statistics.

7. And between 6% and 12% according to the 2007 Census.

8. The average hours of work per week is not directly inversely related to the effective rate of unemployment since many workers work more than the standard 40 hours per week, while the under-employment is only measured for those who work less than 40 hours per week.

9. Estimated by author from the 2006 HIES data.

There is also an age profile to the under-employment (Table 4). Of those aged 15 to 19, only those working for pay or profit have average hours of work closer to their older counterparts (34 hours per week). Those in the subsistence sector work only an average of 16 hours. It may be noted, for discussion elsewhere on the age demarcation of the elderly, that ni-Vanuatu aged 55 to 64 have virtually the same number of working hours as those younger, for all categories of work.

Table 4 Hours of work by age groups in Vanuatu, 2006

Age grp.	Average hours worked per week by economically active				% Econ. active
	Pay/Profit	No Pay	Subs.	All	
15 to 19	34	22	16	19	42
20 to 24	35	25	20	24	66
25 to 34	35	31	22	26	80
35 to 44	38	28	22	27	82
45 to 54	35	25	21	26	77
55 to 64	34	21	21	24	73
64 to 74	28	19	16	17	64
All	36	26	20	25	71

Source: 2006 HIES, Vanuatu

generates enough income to look after all the needs of their families in terms of food, education, health services, housing and care of the elderly. Working age people and households will not be able to save enough to take their families out of poverty. Hence, the second demographic dividend will also be hard to realise, while worsening unemployment over time must worsen other social problems such as crime, violence against women and STIs.

The economically active and gender

Table 5 Average total hours of work per week by the economically active, Vanuatu, 2006

Age group	Av. hours of work per week		
	Male	Female	All
C 10 to 14	16	18	17
D 15 to 19	18	19	19
E 20 to 24	25	23	24
F 25 to 34	27	25	26
G 35 to 44	29	25	27
H 45 to 54	28	22	25
I 55 to 64	24	22	23
J 64 to 74	21	12	18
K > 74	15	17	16
All	26	23	24

Source: 2006 Vanuatu HIES.

These rates of real effective unemployment are well above the official recorded rates of unemployment. It is extremely likely, therefore, that the situation will be no different in Solomon Islands and Papua New Guinea. Any economy where some 25% to 40% of the work force are not engaged in productive work must have relatively low values for GDP per capita (as is the case in PICs). Support ratios [(15 to 64) / total population] will severely overestimate the ratio of productive people to total population, and dependency ratios will be biased downwards. Therefore, the first demographic dividend and its changes will be difficult to identify.

Inevitably, the current rates of economic growth in PICs (3%–4%) will be unable to ensure that the potential workforce

One of the weaknesses of most labour statistics in the Pacific is that the definition of the economically active does not include unpaid household work. Therefore, the data gathered on work by the economically active by and large indicates that men do more work than women. The Vanuatu 2006 HIES data superficially suggests that females work some three hours less than do males (Table 5). But this does not take into account household work, the bulk of which would undoubtedly be done by females.

This is clearly illustrated by the only Pacific country (Fiji) to have data on household work done by all persons in the economy, economically active or otherwise classified. While the total amount of paid work is indicated to give a slight advantage to males, Table 6 indicates that, when all work is taken into account (including unpaid household work) females are found to be doing more work on average (by 31%) and the gap is large at all age levels.

It is also instructive that females between the ages of 55 and 64 do some 37% more work than the males in that age group, while those over 64 still do an average of 33 hours per week. These numbers indicate that there is an urgent need to examine patterns of total work in all PICs in general, while focusing on the gender dimensions in particular.

Table 6 Average total hours per week of work (including household work) by gender, Fiji, 2004–2005

Age group	Average total hours of work per week				
	Female.	Male	All	(F-M)	% (F-M)/M
15 to 24	58	43	48	14	33
25 to 34	64	50	54	14	28
35 to 44	64	50	54	14	29
45 to 54	59	46	50	13	28
55 to 64	56	41	45	15	37
> 64	39	30	33	9	30
All	61	46	51	14	31

Source: 2004-05 Employment and Unemployment Survey

The young, the elderly and dependency ratios

Pacific countries have quite a diversity of burdens imposed by the young (0 to 14) on the potentially productive persons (15 to 64). In 2005, dependency ratios ranged from a low of 53 % for Fiji to a high of 72% for Solomon Islands. All countries, however, have declining ratios, some declining much faster than others.

By 2015, it is estimated that Tuvalu will have the lowest dependency ratio for the young (45%), Fiji will have 48% while all the others will be between 60% and 70% (Table 7).

The elderly, on the other hand, will impose very low burdens on the productive during this decade: 10% or less. Some countries, such as Papua New Guinea and Marshall Islands will have less than 5%. Others, such as Tonga with -36%, will have declining percentages between 2005 and 2015, while yet others will see quite sharp increases (Fiji 41% and Marshall Islands 36%) (Table 8).

Table 7 Dependency ratios: (0 to 14) as a percentage of (15 to 64)

	2005 %	2015 %	% Change
Fiji	53	48	-9
Vanuatu	70	62	-11
Solomon Is	72	67	-6
Papua New Guinea	67	62	-8
Samoa	77	63	-19
Tonga	67	63	-6
Kiribati	62	52	-16
Tuvalu	59	45	-24
Marshalls	72	67	-7

Table 8 Dependency ratios: over 64 as a percentage of (15 to 64), 2005, 2015

	2005 %	2015 %	% Change
Fiji	7	9	41
Vanuatu	6	6	11
Solomon Is	6	6	-1
Papua New Guinea	4	4	8
Samoa	9	9	6
Tonga	10	6	-36
Kiribati	6	6	-1
Tuvalu	10	10	2
Marshalls	4	5	36

Taking the two together, the dependency ratios for all these countries, while declining over the period 2005 to 2015, are still on the high side. While some reductions are large, these countries started from a high base. None will have fallen below 50% by 2015 (Table 9). Nevertheless, the fundamental aspect to look forward to is that all of them are experiencing increases in their support ratios, thereby creating the possibility of improvements in the standards of living of their populations.

Table 9 Dependency ratios, 2005 and 2015

	2005 %	2015 %	% Change
Fiji	0.60	0.57	-3
Vanuatu	0.76	0.69	-9
Solomon Is	0.77	0.73	-6
Papua New Guinea	0.71	0.66	-7
Samoa	0.86	0.72	-16
Tonga	0.77	0.69	-10
Kiribati	0.68	0.58	-15
Tuvalu	0.69	0.55	-20
Marshalls	0.76	0.73	-5

Population growth and pressures on education budgets

Most Pacific countries articulate the national development objective of keeping all school-age children in school and reducing drop-outs at all levels. Some countries, such as Fiji, have articulated objectives (that tax-payers funds will be used for) to ensure access to school for all school-age children and also to ensure that examinations will not be used to push out or filter children.

For most PICs, education receives the largest budgetary allocation. Typically, the allocation to education comprises some 25% of total government expenditure, and is usually around 5% to 7% of GDP. The bulk of education funds are spent on teachers' salaries (roughly 85%). For those countries where enrolments are rising, additional funds are needed for hiring and training additional teachers, and for building schools, class-rooms and science laboratories.

National commitments to universal access to education come with a hefty price. The ratio of unit recurrent costs at primary : secondary : tertiary is usually around 1 : 2 : 5, while university education is typically around 10 to 20 times the cost of primary education. Pre-school financing is somewhat of an anomaly as most PICs have not committed themselves to ensuring 100% enrolment at pre-schools. With most pre-schools depending on parental financing, enrolments are generally the domain of the well-off, as pre-school fees are typically many times higher than primary school fees.

It is unfortunately the case that the Melanesian countries have extremely high rates of non-attendance at school, especially at the secondary school-age. Vanuatu non-attendance at school is an extremely high 90% at age 5, 22% at primary school age (6 to 11), some 39% at secondary school age (11 to 17) and 81% at tertiary age (18 to 20).¹⁰

Table 10 Pre-school demand (5 year-olds)

	2009 %	2015 %	% Change
Fiji	18167	17955	-1
Vanuatu	6214	7112	14
Solomon Is	15081	16609	10
Papua New Guinea	177614	190815	7
Samoa	4780	4138	-13
Tonga	2665	2572	-3
Kiribati	2126	2608	23
Tuvalu	204	191	-6
Marshalls	1451	1557	7

Commitments to universal access to education places heavy burdens on governments, even taking care of the back-logs is a struggle. Large increases in the numbers of school-age children can therefore have a very significant impact on the education budget and, consequently, on the overall government budgetary requirement, as well as (through budget deficits) on the public debt which must be paid for by future generations.

Table 10 indicates the diversity of changes in potential demand for pre-school education, with negative growth expected between 2009 and 2015 for Samoa, Tonga, Tuvalu and Fiji but quite high growths for Kiribati, Vanuatu, Solomon Islands and Papua New Guinea.

¹⁰ Estimated from Vanuatu HIES 2006 data.

Table 11 Extra pre-school classes and teachers

	Backlog	2009-15	Total
Fiji	458	-11	448
Vanuatu	262	50	312
Solomon Is	619	92	711
Papua New Guinea	7036	775	7810
Samoa		-40	-40
Tonga		-5	-5
Kiribati		32	32
Tuvalu		-1	-1
Marshalls		7	7

Table 12 Primary age children (6 to 13)

	2009	2015	% Change
Fiji	145848	143413	-2
Vanuatu	45528	51375	13
Solomon Is	106734	123225	15
Papua New Guinea	1288199	1438638	12
Samoa	39830	36102	-9
Tonga	20234	20623	2
Kiribati	18612	18227	-2
Tuvalu	1738	1507	-13
Marshalls	11456	11762	3

Table 13 Probable extra classrooms and teachers (2009–2015)

	Backlog	2009 – 2015	Total
Fiji	0	-76	-76
Vanuatu	219	158	377
Solomon Is	471	491	962
Papua New Guinea	5970	4413	10383
Samoa	0	-98	-98
Tonga	0	11	11
Kiribati	0	-16	-16
Tuvalu	0	-7	-7
Marshalls	0	9	9

Taking into account the fact that the Melanesian countries have large backlogs in enrolment of pre-school children (roughly 90% for Vanuatu, probably a similar number for Solomon Islands and Papua New Guinea, and about 50% for Fiji), the expected number of additional classrooms and pre-school teachers is as shown in Table 11.

These numbers also have associated with them the teacher training costs, the salaries of the trained and employed teachers, and the capital costs of building new pre-school classrooms, which, because of the teaching aids required for infants, may cost more than the primary school classrooms.

Quite similar demographic patterns are indicated when numbers of primary age children are estimated for 2009 and 2015. Tuvalu, Samoa, Kiribati and Fiji all indicate reductions in potential demand, while Solomon Islands (+15%), Vanuatu (+13%) and Papua New Guinea (+12%) are faced with extremely large increases in demand (Table 12).

When rough estimates of the likely backlogs for Vanuatu, Solomon Islands and Papua New Guinea are taken into account, the number of teachers to be trained and extra classrooms to be built, as well as the salaries to be paid, are as shown in Table 13. For Papua New Guinea, Solomon Islands and Vanuatu, these increases also probably translate into additional schools.

The demographic lesson here is that, again, Samoa, Fiji, Kiribati and Tuvalu have breathing space at the primary education level for the next five years, during which time schools may be rationalised and pupil:teacher ratios increased where they have been generally low. With no additional pressures posed by pupil numbers, the Ministries of Education in these countries may focus on investment in improving the quality of education, and not be driven by a demand for access for increasing cohorts of children.

The changes in the numbers of secondary age children are in the process of transition for some countries (Table 14). Thus Samoa, Fiji and Tuvalu will see increases from 2009 to 2012, but decreases from 2012 to 2015. Solomon Islands, Papua New Guinea and Kiribati will see increases throughout the period. Tonga will have a stagnant secondary age population over the next five years.

Changes in the tertiary age cohorts have not yet seen the benefits of the demographic transitions (Table 15). All the countries (except for the Marshall Islands) will be seeing increases in the numbers of people potentially seeking tertiary education. For those countries with already low enrolments at this level (Papua New Guinea, Solomon Islands, Vanuatu and Fiji), the backlogs will add a significant burden to the changes indicated by the increases in population, which are themselves quite high: 12% for Papua New Guinea, 13% for Solomon Islands and 8% for Vanuatu. Unusually, Samoa can expect a 20% increase in potential demand for tertiary places.

In addition to the increased demand for resources for recurrent expenditure on education, high population increases can also impose increased demand for capital investments associated with higher student enrolments.

Table 16 indicates the very high capital investments required for Papua New Guinea and Solomon Islands for both primary and secondary schools; for Vanuatu only for primary schools; and for Fiji only for secondary schools. While a rationalisation may be required for primary schools. For Papua New Guinea, Solomon Islands and Vanuatu, the current under-enrolments imply that, were all school-age children to be attending school, large backlogs of schools would need to be built.

Table 14 Percentage of change in secondary school age children (ages 14 to 17)

	% change 2009–2012	% change 2012–2015
Fiji	4	-2
Vanuatu	1	0
Solomon Is	10	10
Papua New Guinea	6	5
Samoa	4	-2
Tonga	0	0
Kiribati	9	5
Tuvalu	1	-4
Marshalls	10	3

Table 15 Percentage of change in tertiary age persons (18 to 21)

	Enrolment 2009	Enrolment 2015	% change
Fiji	63178	69734	10
Vanuatu	20641	22288	8
Solomon Is	41219	46395	13
Papua New Guinea	526931	587705	12
Samoa	15155	18247	20
Tonga	7487	8307	11
Kiribati	8640	8931	3
Tuvalu	740	787	6
Marshalls	5133	5043	-2

Table 16 Number of extra schools indicated (2009–2015)

	No. extra schools indicated	
	Primary	Secondary
Fiji	-8	6
Vanuatu	18	1
Solomon Is	52	46
Papua New Guinea	470	310
Samoa	-12	1
Tonga	1	0
Kiribati	-1	6
Tuvalu	-1	0
Marshalls	1	4

Population growth and labour market entrants

Most PICs, especially the Melanesian countries, can expect significant growth in the number of entrants to the labour market. In the absence of detailed data on drop-out rates, one can make a simple assumption about the numbers of people coming onto the labour market each year (Table 17).¹¹ Solomon Islands can expect the largest increase of 17%. These numbers, however, underestimate the real extent of the employment problem.

For all the Melanesian countries, the rate of growth of formal employment is roughly in proportion to their average growth in GDP. The unfortunate aspect is that very small proportions of their labour force are in the formal sector (Table 18). Compared to their output from schools, the intake into the formal sector is small indeed, leaving a very large percentage having to find self-employment, mostly in the subsistence sector.

11 Here it is assumed that the gross number entering the labour market is the average of the cohorts aged 15 to 20 inclusive.

Table 17 Estimated gross numbers entering the labour market (average of ages 15 to 20)

	Estimated gross numbers entering the labour market		
	2009	2015	% Change
Fiji	16561	17730	7
Vanuatu	5334	5507	3
Solomon Is	10569	12414	17
Papua New Guinea	137168	151635	11
Samoa	4278	4723	10
Tonga	2085	2187	5
Kiribati	2136	2402	12
Tuvalu	197	200	2
Marshalls	1245	1367	10

Making the simple assumption that some 50% of those not absorbed in the formal sector are absorbed in self-employment (largely subsistence), then rough estimates of the cumulative unabsorbed as a percentage of paid employment may be expected to rise to a massive 70% for Solomon Islands, 65% for Vanuatu and 26% for Fiji (Table 19). Clearly, the former two Melanesian countries, and no doubt Papua New Guinea as well, can expect a massive increase in problems associated with unemployment. If gender disaggregated analysis were to be done, and assuming that a significant proportion of the unabsorbed females will move into full-time household worker positions (as housewives), then the unemployment problem for Solomon Islands and Vanuatu becomes very much a male unemployment problem, especially of youths. Associated with all these extremely high proportions of unemployed or under-employed youths will be other social ills, such as crime against persons and property, violence against women, the rise in STDs, and possibly political instability and civil unrest.

Table 18 Output from schools and unabsorbed in formal sector

	Ch. in Formal Emp.	Output from Schools	Unabs.	Percentage Unabs.
Fiji (2%)	4286	16834	12547	75
Solomon Is (3%)	1688	10751	9063	84
Vanuatu (3.8%)	1016	5411	4395	81

Table 19 Cumulative unabsorbed as a percentage of paid employment

	2009	2015
Fiji	12	26
Solomon Is	31	70
Vanuatu	32	65

Lessons from ethnic demographic differences in Fiji: the impact on poverty

It is to be expected that inter-country differences in demographic differences may not have much of an impact on individual household attitudes towards family planning as a tool of poverty reduction, or even on governments, for whom ‘other country’ experiences may appear irrelevant. It may be useful, therefore, to examine whether ethnic demographic differences within the same country—Fiji—can be an effective advocacy tool for public education campaigns in the other Melanesian countries.

While Fiji’s aggregated demographic characteristics appear to be quite advantageous compared to those of Papua New Guinea, Solomon Islands and Vanuatu, much of the positive differences are due to the significant presence of Indo-Fijians, who, with their much lower fertility and birth rates, are quite different demographically from the Melanesian indigenous Fijians.

At the 2007 Census, indigenous Fijians comprised some 57% of the population and Indo-Fijians 37%. Some twenty years ago, the proportions were roughly half-half, but several coups since 1987 have accelerated the emigration of Indo-Fijians. Unfortunately, ethnic shares of the population (and of voters) have had an important impact on national politics, possibly contributing to the neglect of family planning issues for indigenous Fijians.

For the last two decades, the Indo-Fijian population has had a significantly lower total fertility rate (TFR) than Fijians, and Indo-Fijian TFR has been falling faster than that for Fijians. By 2001, the gap was estimated to be

65% (Table 20). A similar trend exists for the gross and net fertility rates, with the Indo-Fijian rate projected to have fallen below replacement rate by now.¹²

Table 20 Total fertility rates in Fiji

	TFR Fijian	TFR Indo-Fijian	% I-F/I
1986	3.6	2.7	33
1996	3.5	2.4	46
2001	3.3	2.0	65

Source: Bakker (2007), Table II.

Hence, by the time of the 2007 Census, while the share of the 0 to 14 age group had declined for indigenous Fijians from 38% to 33% (a decline of 15%), that for Indo-Fijians had fallen faster, from 33% to 23% (a decline of 29%) (Table 21).

The Indo-Fijians continued to have a much higher proportion of the population between the working ages of 15 and 24, with the proportion increasing for both Fijians and Indo-Fijians by 7% and 8% respectively. For both ethnic groups, the elderly as a proportion rose, but the increase was higher for Indo-Fijians. Overall, not only was the total dependency ratio for Fijians significantly higher than that for Indo-Fijians, the difference had grown from 31% in 1996 to 38% in 2007. This was despite the fact that both TDRs had declined in the inter-censal period. Such significant differences in TDRs will inevitably have their impact on the standards of living of households, and the ability of the income earners to satisfy other household needs.

These population dynamics pose quite different resource requirement burdens on the two major ethnic groups in Fiji, especially for education. Historically, both primary and secondary schools were built by the different ethnic communities, usually through their religious organisations. While the Government of Fiji has increasingly taken on the financial responsibility for teachers' salaries, the overall management of the schools remains the responsibility of private sector organisations.

Table 22 indicates that, while the Fijian population grew at all school age groups (primary, secondary and tertiary), the Indo-Fijian population declined overall by 7%: by 34% at primary school ages, 26% at secondary school ages and 16% at tertiary ages. Overall, the aggregate primary school age population was indicated to have declined by 12% while the secondary school age groups declined by 6%.

Combined with a high rural-urban drift of Indo-Fijians¹³ there has been depopulation of rural Indo-Fijian schools, with the government finding great difficulty in justifying staffing in these schools. There has also been a growing trend of Fijian students attending Indo-Fijian schools, not only because of the empty places available, but also because of Fijian parents' perceptions that Indo-Fijian schools are better for their children.

Whatever the causes, the overall reality is that, nationally, there has not been the increased demographically driven demand for primary and secondary teachers that exists in the other Melanesian countries.¹⁴ The Indo-Fijian education authorities have enjoyed the luxury of not needing to expand primary or secondary school

Table 21 Age Profile (1996, 2007)

	Fijian	Indo-F	% Diff
1996 (Vert.%)			
0 to 14	38	33	17
15 to 54	53	60	-11
> 54	9	7	17
All	100	100	
2007 (Vert. %)			
0 to 14	33	23	41
15 to 54	57	64	-12
> 54	10	12	-15
All	100	100	
Perc. Change 1996 to 2007			
0 to 14	-15	-29	
15 to 54	7	8	
> 54	20	67	

Source: 1996 and 2007 Censuses

¹² While the rapid Indo-Fijian decline in fertility between the 1960s and current times is apparently one of the fastest ever recorded (Bakker, 2007), it is unclear what role, if any, was played by voluntary family planning and reproductive health programmes.

¹³ Largely due to the expiry of native land leases on the sugarcane farms.

¹⁴ This is, however, a passing phenomenon, as the Indo-Fijian share of total enrolment diminishes, and that of Fijians increases.

Table 22 School population changes (percentage) 1996–2007

School population changes, %			
School Ages	Fijian	Indo-F	Both
Ages 5-12	6	-34	-12
Ages 13 to 17	13	-26	-6
Ages 18 to 21	20	-16	3
Total	21	-7	8

Source: Fiji Census data

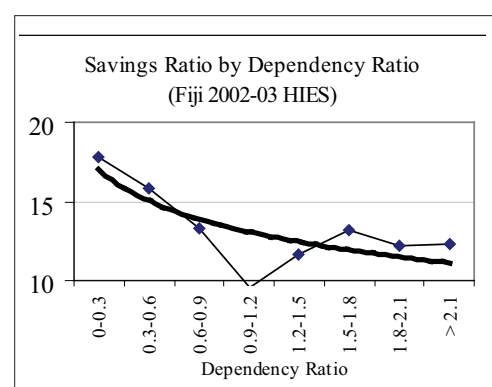
ratios below 0.3 to just over 10% at dependency ratios over 2 (Figure 2). The decline in the savings ratio is even more pronounced when savings ratios are graphed against the percentage of those aged 0 to 20 in the households. A savings ratio of above 20% when the percentage of 0 to 20 is below 20% declines to below 12% when the ratio of 0 to 20 in the household approaches 60%. The higher savings ratios, over time, naturally translate into wealth accumulation, and the overall improvement of standards of living and reduction of poverty.

Table 23 Total dependency ratio (TDR), 1996, 2007

	TDR Fijian	TDR Indo-Fijian	% Diff
1996	89	68	31
2007	76	55	38
% Change	-14	-18	

facilities. Fijian schools have also faced reduced pressure as Fijian children increasingly attend Indo-Fijian schools. The Fiji education system has, therefore, had a window of opportunity to use their scarce public and private resources to focus more on improving the quality of their education provision rather than increasing access. These benefits have derived primarily from the reduced numbers of school age children, which is in turn a result of lower fertility rates in previous decades, clearly underlining the importance of family planning policies at the national and household levels.

The data also indicate that, as the dependency ratio of households decreases (Table 23), the household savings ratio also declines quite significantly, from above 15% of income at dependency

Figure 2 Savings ratio by dependency ratio

Source: Fiji 2002–2003 HIES

The impact of household size on poverty in Fiji

Historically, Fiji's population demographics, politics and economic equity between the major ethnic groups have been closely inter-twined. Indigenous Fijians were not encouraged to be part of the modern economy for most of the colonial period, which ended in 1970, so the commanding heights of the economy were not shared by Fijians. Nevertheless, they had much greater food security than did Indo-Fijians, because of their access to their own lands, although subsistence affluence would not be an appropriate descriptor either.

The larger political parties in Fiji have derived their political support almost exclusively from either indigenous Fijians or Indo-Fijians. For this reason, the relative population and voter sizes have always been crucial in Fiji's politics. The parties' appeals to voters have frequently relied on the message that *their* ethnic group was the *most poor* and therefore their political party would, if in power, pursue their interests. Political parties in power are often accused by others of ignoring other poor groups, while each government's special policies towards the dominant party's own interest groups are criticised by other political parties.

Such polarised ethnic attitudes have ensured that there has been significant political tensions in the country throughout its post-independence period (from 1970), resulting in coups in 1987, 2000 and 2006. The military coups of 1987 and 2000 removed governments led by Indo-Fijian political parties, and the incoming indigenous Fijian political parties usually adopted affirmative action policies, supposedly to give special treatment to indigenous Fijians who were seen to be economically lagging behind Indo-Fijians and others.¹⁵

15 The military coup of 2006 removed the major indigenous Fijian party from Government.

The most recent poverty analysis (Narsey 2008) suggests, however, that the ethnic differences in the incidence of poverty are relatively insignificant. Of relevance to this paper is that the two ethnic groups have significantly different demographic profiles, which can be used by stakeholders interested in restoring to centre stage the family planning aspects of reproductive health as a development priority.

How does household size affect a family's standard of living and position in the income deciles? Table 24 gives the distribution of the two major ethnic populations in households, ranked by income per adult equivalent (UN definition). The 2002–2003 HIES results indicate that the two major ethnic groups were fairly evenly distributed through the deciles, with roughly 30% of each group being in the bottom three deciles (PD 1–3), usually characterised as *the poor*.

Table 24 Ethnic distribution of populations in Fiji by population deciles (%), 2002–2003

PDec	Fijian %	Indo-Fijian %	All %
PD 1	10	10	10
PD 2	10	11	10
PD 3	11	10	10
PD 4	10	9	10
PD 5	9	11	10
PD 6	10	11	10
PD 7	10	10	10
PD 8	10	9	10
PD 9	10	9	10
PD top	9	10	10
All	100	100	100
Bottom 3	30.6	30.4	30.0

Source: Narsey (2008)

Table 26 Average number of (0 to 14) per household by population decile and ethnicity, Fiji

Average number of (0 to 14) per household				
PDec	Fijian	Indo-Fijian	All	% I-F/I
PD 1	2.6	1.6	2.1	70
PD 2	2.4	1.5	1.9	56
PD 3	2.2	1.6	2.0	39
PD 4	2.3	1.4	1.9	62
PD 5	1.8	1.2	1.5	51
PD 6	2.1	1.2	1.6	81
PD 7	1.9	1.1	1.5	71
PD 8	1.7	0.9	1.4	81
PD 9	1.8	0.8	1.3	123
PD top	1.1	0.7	0.9	73
All	1.9	1.2	1.6	67

As is the case elsewhere in the world, the poorest households generally tend to be larger (Table 25). However, at all levels, Fijian households were significantly larger than Indo-Fijian households—21% nationally, but a much larger 28% in the lowest decile. Table 26 indicates that the major cause of the larger household sizes were the much larger numbers of those aged 0 to 14.

Table 25 Number of occupants per household, by population decile and ethnicity, Fiji

No. occupants per household				
PDec	Fijian	Indo-Fijian	All	% I-F/I
PD 1	6.9	5.4	6.2	28
PD 2	6.2	4.9	5.5	26
PD 3	6.0	5.0	5.6	18
PD 4	5.9	4.6	5.3	28
PD 5	5.2	4.6	5.0	13
PD 6	5.6	4.6	5.1	21
PD 7	5.2	4.3	4.8	23
PD 8	5.1	4.2	4.7	22
PD 9	4.9	3.8	4.4	29
PD top	3.7	3.3	3.5	12
All	5.4	4.4	4.9	21

With Fijian households having a slightly higher percentage of potential income earners (those aged 15 to 54), the appropriate statistic to examine is the number of children aged 0 to 14 as a ratio of the number of potential income earners. Table 27 shows that Fijian potential income earners need to support some 58% more children aged 0 to 14 than do Indo-Fijian income earners. Indeed, indigenous Fijian households have significantly more children aged 0 to 14 per potential income earner, at all decile levels, than do Indo-Fijian households.

There are also differences in the number of the elderly per potential income earner but, interestingly, Fijian households in the bottom three deciles have some 16% more elderly to support, per income earner, while those in the top three deciles have 22% less (data not shown).

Table 28 indicates that, for the first nine deciles, the average household incomes per adult equivalent are reasonably equal for both ethnic groups (as would be expected, given the definition of the deciles), despite Fijian income earners supporting significantly higher numbers of those aged 0 to 14 and those aged over 54. But when one examines incomes per potential income earners (Table 29) it is clear that indigenous Fijian income earners are significantly better off—by between 8% and 13% in the lowest nine decile groups. The only decile at which the Indo-Fijian income earner is at a relative advantage is at the top decile.

In summary, had indigenous Fijians had the same fertility progressions that Indo-Fijians had over the last twenty years, Fijian families would have been far less in poverty than Indo-Fijian families and households. Conversely, had Indo-Fijian households had similar fertility levels and progressions as indigenous Fijians, they would have been much more in poverty than Fijian households.

This is of course a snap-shot at a point in time. What is not brought out here is the long-term impact of families being able to save more out of their current incomes and accumulate more wealth, and whose productivity in the future enables these individuals and households to enjoy higher incomes. In the Fiji

Table 29 Income per (15 to 54) age group

PDec	Fijian	Indo-F	All	% (F-I)/I
PD 1	1121	1040	1090	8
PD 2	1747	1578	1669	11
PD 3	2200	1993	2109	10
PD 4	2677	2446	2569	9
PD 5	3096	2887	2988	7
PD 6	3612	3326	3471	9
PD 7	4304	3895	4113	11
PD 8	5081	4696	4908	8
PD 9	6847	6037	6504	13
PD top	11774	13723	13047	-14
All	4374	4233	4408	3

Table 27 Ratio of (0 to 14) to (15 to 54) by population decile and ethnicity, Fiji

PDec	Ratio of (0 to 14) to (15 to 54)			
	Fijian	Indo-Fijian	All	% (F-I)/I
PD 1	0.7	0.5	0.6	51
PD 2	0.7	0.5	0.6	42
PD 3	0.7	0.5	0.6	33
PD 4	0.7	0.5	0.6	44
PD 5	0.6	0.4	0.5	51
PD 6	0.7	0.4	0.5	76
PD 7	0.6	0.4	0.5	63
PD 8	0.6	0.3	0.5	73
PD 9	0.6	0.3	0.5	113
PD top	0.5	0.3	0.4	64
All	0.7	0.4	0.5	58
Bottom 3	0.7	0.5	0.6	42

Table 28 Income per adult equivalent by population decile and ethnicity, Fiji,

PDec	Income per adult equivalent			% difference (F-I)/I
	Fijian	Indo-Fijian	All	
PD 1	717	718	719	0
PD 2	1122	1116	1120	1
PD 3	1430	1429	1430	0
PD 4	1740	1738	1739	0
PD 5	2076	2080	2080	0
PD 6	2458	2464	2460	0
PD 7	2953	2955	2954	0
PD 8	3595	3624	3608	-1
PD 9	4724	4690	4723	1
PD top	8787	10297	9728	-15
All	2958	3108	3094	-5

context, for instance, it is well-known that Indo-Fijian households are generally able to own their homes much earlier than Indo-Fijians, and much greater proportions at similar income levels to indigenous Fijians. A similar argument would apply to other capital items such as cars, boat engines, brush-cutters—all of which lead either to high income-earning potentials or a better quality of life.

This very simple example, drawn from two ethnic groups of households within the same economy,

illustrates the very significant impact that reduced and reducing fertility can have on the incidence of poverty over the long term.

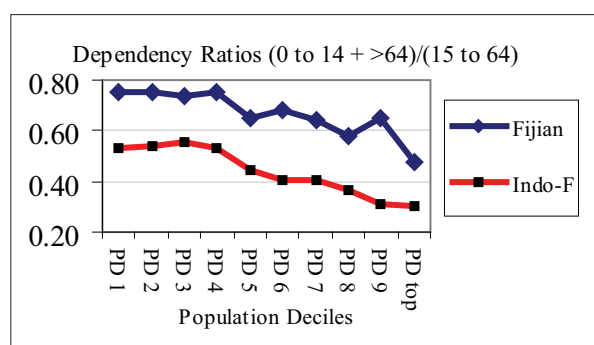
Clear lessons can be drawn for communicating the benefits of family planning to Melanesian countries, which currently do not have the declines in fertility rates that have been witnessed among Indo-Fijians in Fiji.

A major research question remains for the ethnic comparisons in Fiji: why did the Indo-Fijian population show such massive declines in fertility over the last two to three decades? Specifically, did family planning two decades ago have any significant impact? Or were there other factors such as clear recognition that, given the lack of government support for the education of Indo-Fijian children, families could not afford to have the large numbers of children they had in the 1940s, 50s and 60s?

One factor that needs to be investigated is the political influence on Fijian fertility, with ethnic relativities in population and voters being an important consideration for Fijian politicians and leaders.

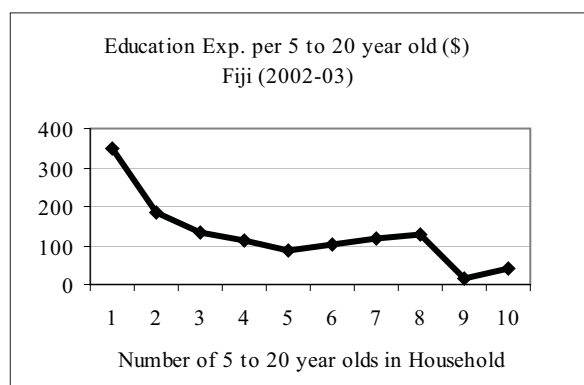
One of the tasks that policy-makers face is to convince households that large family size is not conducive to a high standard of living. In particular, it would be useful to establish that households which have high dependency ratios tend to be poorer. The data from the Fiji 2002–03 HIES suggest that that is indeed the case (Figure 3). For both Fijians and Indo-Fijians, the lower poverty deciles were associated with high dependency ratios (above 70% for Fijians and above 50% for Indo-Fijians), while the higher deciles were associated with lower dependency ratios.¹⁶

Figure 3 Dependency ratios (0 to 14 + > 64) / (15 to 64) by ethnicity, Fiji, 2002–2003



Source: 2002–2003 Fiji HIES

Figure 4 Education Expenditure per 5 to 20 year old FJD, 2002–2003



Source: 2002–2003 Fiji HIES

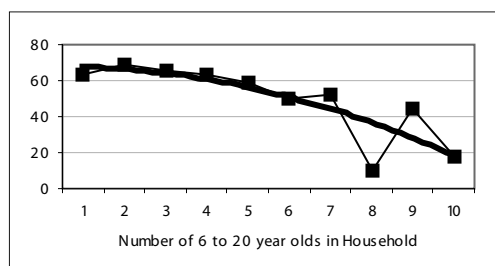
It may be shown that large household size acts as a constraint on standards of living and enjoyment of services such as education and health, especially for the poor. The benefits of family planning may be seen in a more concrete way by examining HIES data on expenditure on education in relation to the number of school-age children in the household.

Figure 4 gives the education expenditure per 5 to 20 year-olds in the household. There is a very clear inverse relationship with the numbers of 5 to 20 year-olds in the household. Having fewer children allows the households to spend more per child and thereby improve academic outcomes. This would seem to be a very logical, simple arithmetic outcome but it is seldom utilised by national policy-makers.

Similar results are available for other Melanesian countries. For Vanuatu, Figure 5 indicates that there is a very strong inverse relationship between the percentage of 6 to 20 year-olds at school, and the number of 6 to 20 year-olds in the household, falling from above 60% where the number is less than three to around 20% when the number reaches ten. Correspondingly, the quality of the education that Ni-Vanuatu families are able to give their children suffers when the number of children increases. Thus, annual education expenditure per 6 to 20 year-olds declines from around 1500 vatu when the number of 6 to 20 years-olds is one, to almost zero when the number reaches eight (Figure 6). Similar declines in education expenditure per school-age child are also to be seen in households in Solomon Islands (Figure 7).

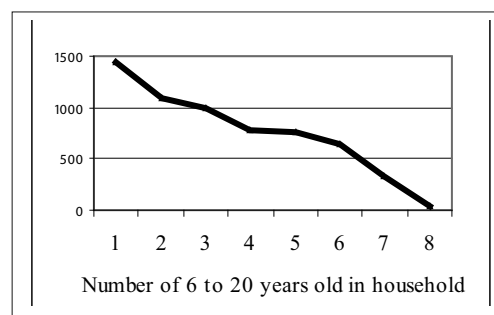
¹⁶ It is necessary to differentiate ethnically because of the very different fertility patterns.

Figure 5 Percentage of 6 to 20 year olds at school, 2006, Ni-Vanuatu only



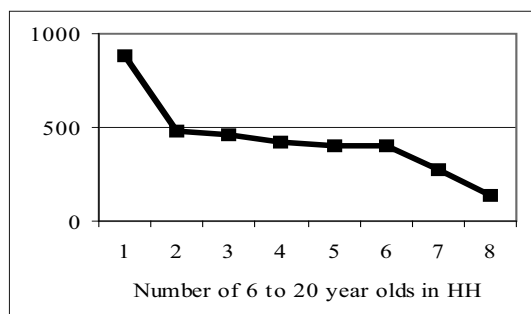
Source: Vanuatu 2006 HIES

Figure 6 Education Expenditure per 6 to 20 year olds in households, Vatus per annum, 2006, Ni-Vanuatu



Source: Vanuatu 2006 HIES

Figure 7 Education Expenditure per 6 to 20 year olds in households, (\$) Melanesian Solomon Islanders only



Source: Solomon IS HIES

In sum, it seems that, despite the significant economic benefits and poverty reduction possibilities available through voluntary family planning which could result in lower and reducing fertility, population stakeholders in the Pacific have not devoted many of their resources to policy advocacy in this area. There is a need to examine why this has been so.

Global priorities, lack of PIC human resources and family planning

Over the last fifteen years, stakeholders in development issues related to population have generally moved away from the original focus on the need for developing countries to reduce their population growth towards a much broader set of issues related to the Millennium Development Goals (MDGs) approved by some 189 countries in 2000. This is something of an anomaly, given the international thinking on the matter since then.

Robertson (2007)¹⁷ argues that, after the 2005 World Summit, while there was an acceleration of interest in a broad range of issues related to sexual and reproductive health, there was relative neglect of family planning issues as an important strategy for poverty reduction. Robertson notes that there was ‘a failure to recognize the importance of universal access to contraceptive information and services as an explicit strategy for poverty reduction and as a fundamental human right’. She concludes that this relative neglect, combined with donor fatigue and competition for limited resources available for HIV prevention, resulted in fewer resources being made available for family planning programs.

Robertson points out that the reduced global focus on family planning was paralleled in the Pacific, despite the fact that many Pacific countries (especially the Melanesian countries of Papua New Guinea, Solomon Islands and Vanuatu) continued to have some of the highest total fertility rates in the world and their populations continued to grow far more rapidly than the capacity of their economies to sustain their basic needs. Some Pacific Islands had the highest population densities in the world, e.g. the Micronesian countries with an average population density of 170 persons per square mile.¹⁸ Not unexpectedly, some of the countries with high population growth rates had quite low contraceptive prevalence rates, with Solomon Islands having a mere 10% and Vanuatu 28% in 2005 (Robertson, 2007 Table 2). Some of these countries also had the highest teenage fertility rates in the world.

¹⁷ This section draws heavily on the analysis and conclusions in Robertson (2007).

¹⁸ Statistics and Demography Database, PRISM database, SPC.

Given that several of the Pacific countries have continued their decades of experience of high total fertility rates, it needs to be questioned why the poverty impact arguments and the family planning imperatives have virtually disappeared from centre stage. It should be noted that, for several of the PICs, the dangers of rapid population growth were pointed out more than a decade ago, with apparently little impact on national population policies and their actual population growth rates (Cole 1993).

Given that all international organisations operate according to the availability of funds and the priorities of the fund providers, they must focus on whatever is the internationally agreed upon agenda, theme and focus of effort. Over the last thirty years or so, international themes have focused on gender, poverty, child, girl child, HIV and MDGs, just as once upon a time there was a focus on family planning and population dynamics. These international priorities, the funding and work programs then feed through into those of the regional organisations that operate in the Pacific and they in turn feed into the national activities of PICs.

Some Pacific countries have suffered political instability over the last two decades, with dramatically changing national policies stances on most economic policies. Fiji has seen three military coups with significantly different sets of political priorities articulated by those who have assumed authority. These unstable countries do not have robust and sustainable economic and social policies which continue from one government to another, and the roles of civil servants then become crucial. Unfortunately, the composition of the top civil servants also changes with the changes in political governments.

Annually, a very limited number of professionals in small PICs is expected to attend and service international meetings to discuss themes, pass resolutions, and prepare for future meetings. Developed countries and the larger developing countries of Asia and the Pacific usually have robust policy platforms driven by national priorities, which are less susceptible to priorities of global organisations and donors. This is less true for some small developing countries of the Pacific, although there are governments that are quite firmly rooted in their local priorities.

Some PICs also suffer from severe budgetary constraints so that development initiatives are rarely able to be financed. If funding does materialise from international sources, then the natural tendency for PICs is to accept the funding and inevitably the associated priorities and themes. While a recent positive development has been the sector-wide approaches (SWAs) in education and health, pooling funds into a pot for national priorities and use, these are limited as donors are not able to exercise effective monitoring and control. By and large, therefore, PICs are unable to channel international funding completely to their own development initiatives and priorities.

It is unfortunately also a reality that for some PICs facing domestic budget constraints, there is every incentive to send civil servants to attend and service international meetings and present papers for the chosen themes, rather than address what may be their own priority areas at home. Not only are there training opportunities for the human resources involved, often there are significant personal financial incentives.¹⁹

The current international focus on MDGs provides a very good example of this. The global acceptance of the MDGs is no doubt positive overall in that it forces all countries to monitor development from the myriads of perspectives provided by the different MDGs and their subsets. However, there can be negative impacts on Pacific Island countries. The very exercise of taking part in regional and international meetings in order to report on all the MDGs forces Pacific Island countries to devote large amounts of national human resources to work on all the MDGs. There is little time left to focus on what may be quite different priorities for each country. For Melanesian countries, for instance, the most critical problem is, and has been for decades, to provide gainful employment to the rapidly increasing labour force, most of whom cannot be absorbed by the very moderate growth rates of their economy and the even smaller growth of formal sector employment. Yet there are no key MDGs on employment that can usefully monitor progress in this area.

The MDGs also give national targets which are merely relative to existing levels of achievement. While this is no doubt understandable, given that it would be impossible to set absolute targets for the wide variety of developing country conditions, MDG work indirectly discourages PICs from focusing on the more important need to foster employment-generating policies and strategies. Critical amongst these would be the appropriate

¹⁹ Attending international meetings takes the civil servant away from the humdrum of everyday work to exotic international locations. Often the savings out of the DSAs will be significant in the context of their usually low salaries.

growth strategies for PICs, given their resource endowments, and the likely impacts of international protocol (such as the WTO) and regional trading relationships. The recent PIC focus on MDGs has, therefore, been something of a distraction.

This is not to say that MDGs have no relevance for population and development policies. Indeed, a number of MDGs may be used to address population and reproductive health targets, as UNFPA (2008) makes clear. The tendency, however, is for many PICs to focus on MDGs in general, and not necessarily on those population-related areas that ought to be their priority.

Some international organisations respond to countries' requests according to their national priorities as formulated through their NSDPs. That is not the case, however, with all international organisations which work in the area of development. International organisations need to examine their own roles whereby, driven by their own international dynamics of donor fund availability and the perceived need to have global themes for their activities, the very specific needs of smaller PICs may be left by the wayside, and less urgent needs are given total attention.

More importantly, given their most pervasive influence through funding and intellectual inputs, international stakeholders need to ensure that their global policies and efforts are not such that they totally swamp the very thin layer of technical expertise available for such exercises in the Pacific. International stakeholders need to provide expertise and funding where the individual country priorities are. They need to take care that they do not fit every Pacific Island country strategy into the 'global boxes' that have been the norm for the last two decades of rolling fads and themes.

Pacific Island governments must also examine whether they have developed sound national policies on population and development, and sound national strategies that are being implemented. Where these differ from global priorities, PICs need to stand firm and focused on their own national priorities.

PIC priorities for the future

Hayes (2005: 37) notes that "voluntary Family Planning and improvements in Reproductive Health contribute directly at the household level to the needed investment in the health, nutrition and education of each child and indirectly to wider economic growth". He quotes from the 2005 UN Millennium Project "We thus strongly support programmes that promote sexual and reproductive health and rights, including voluntary family planning. Critical to overall success in economic growth and poverty reduction, they can help countries meet the [Millennium Development] Goals, freeing them from the poverty trap and their dependence on aid" (Hayes 2005: 37).

Hayes also notes that implementing key objectives of the 1994 International Conference on Population and Development (ICPD) including "universal access to Reproductive Health by 2015 and fully integrating population concerns into development and poverty eradication strategies" was vital if Asian countries were to achieve their MDGs. One of Hayes' key recommendations (2005: 37) was for the UNFPA to 'continue working with governments and universities in the region to ensure adequate support for research and training in population, RH [reproductive health] and poverty, and to ensure that poverty reduction strategies and other efforts to achieve the MDGs incorporate evidence-based population and RH policies'.

In similar vein, Robertson (2007) argues strongly that governments and politicians, in addition to strengthening sexual and reproductive health measures, needed to also 'reposition family planning as an integral development strategy for poverty reduction ... to promote access for all women and men, especially young people, living in rural areas and outer islands and disadvantaged or marginalized groups, to a full range of SRH information, family planning services and commodities'. More specifically, family planning programs in most countries had to be strengthened, with the assistance of targeted and sustained communication campaigns focused on behavioural change. For such communication campaigns to succeed, solid evidence has to be presented to PIC governments and households about the long-term benefits of family planning.

More recently, Rallu and Robertson (2009)²⁰ outline the potential demographic dividends available for Solomon Islands, Kiribati and Fiji in the near future, because of expected future declines in fertility rates, both a high

20 This paper is currently in press.

decrease and a low decrease variant. They explore the social, political and economic factors affecting the fertility progression in the Pacific, although their treatment necessarily has to be broad-brush. For Rallu and Robertson (2009), the extent of the potential benefit is measured by reference to the projected decline in dependency ratios, which may reflect the potential burdens placed on income-earning members of the household by dependent children and the elderly.²¹ Whether these declines in dependency ratios actually result in concrete benefits for society depends on a whole host of other factors and policy measures implemented by the societies concerned. Nevertheless, as Rallu and Robertson point out, there are windows of opportunity available to households and the economy at large if dependency ratios do fall as projected, especially if family planning initiatives are strengthened and fertility levels do decline, as is possible.

This paper has argued that it is important for decision-makers at the national level, and sexually reproductive persons at the household level, to be convinced that family planning can be a most effective long-term strategy for households to improve their material standards of living and reduce poverty. Decision-makers and households have to be convinced that continued high population growth exercises powerful downward pressure on the ability of governments to satisfy basic needs demands by their communities. This paper has attempted to convince by converting projected populations into economic and financial data, both at the national macro-economic level with purely national budgetary implications and also at the household level with purely household implications.

This paper has shown that contrasts between the Melanesian countries can be extremely useful as educational tools at the macro level. Specifically, the demographic transitions of New Caledonia and Fiji, for different demographic reasons, illustrate the economic benefits for those Melanesian countries that have had better demographic profiles, and for the communities and households within them.

This paper also draws on the internal ethnic demographic differences and converts them into observable and easily understood differences in the resulting standards of living and poverty of the respective households. These arguments were, of course, strong prongs in the early family planning campaigns a few decades ago. They need to be revisited, in the light of the recent experiences of the Pacific Island Melanesian countries.

It is a truism in demographic policy-making that, if national and household family planning measures begin to succeed today, the impacts will be felt in the future: changes in early childhood enrolments and associated demands for resources will be seen in four to six years' time; changes in primary school demands will be seen in seven to 14 years' time; changes in secondary school places in 15 to 18 years' time; and tertiary education demand and labour market entrants will be seen in 19 to 22 years' time.

It is difficult to imagine that PIC political leaders and policy-makers think that far ahead, when, for most of them, the priorities are usually determined by the next election in less than five years' time. It may be precisely because of this lack of foresight on the part of PIC political leaders, especially in Melanesia, that the Melanesian countries in general have shown so little progress fifteen years after signing the ICPD Program of Action in 1994.

The benefits of acting for the long-term future can be significant, as the contrast between China and India illustrates. China began its one child policy some thirty years ago, albeit accompanied by its fair share of abuses and weaknesses, especially the tendency towards female infanticide. The result was that, in the period between 1994 and 2005, the number of children aged 0 to 14 declined by 39 million to 279 million. In contrast, India's population of 0 to 14 year-olds increased by 21 million to 351 million, a burden which India has had to support on a lower economic base and with a relatively poorer economic performance record than China. The contrasting impacts on living standards in China and India can be easily deduced.

If countries like China with a total population of more than one billion can make such significant progress in family planning, surely the relatively tiny Pacific Island countries can achieve similar results and associated benefits.

21 The dependency ratio is the ratio of "dependents" (children aged 0 to 14) and elderly aged 65 and over), as a percentage of those aged 15 to 64.

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Changing age structures, labour markets, public finance and poverty in the Pacific: the case of Vanuatu

Odo Tevi

Most Pacific Island countries (PICs), including Vanuatu, face a major development challenge. Their population is youthful and governments have to provide enough employment opportunities for this young population. They also have to provide social services such as education and health, which means that the pressure on the public purse is high. Furthermore, this demographic pattern has resulted in an increase in the urbanisation rate over the years, and this has given rise to the incidence of poverty—a factor that is closely related to an increasing number of social problems in urban areas.

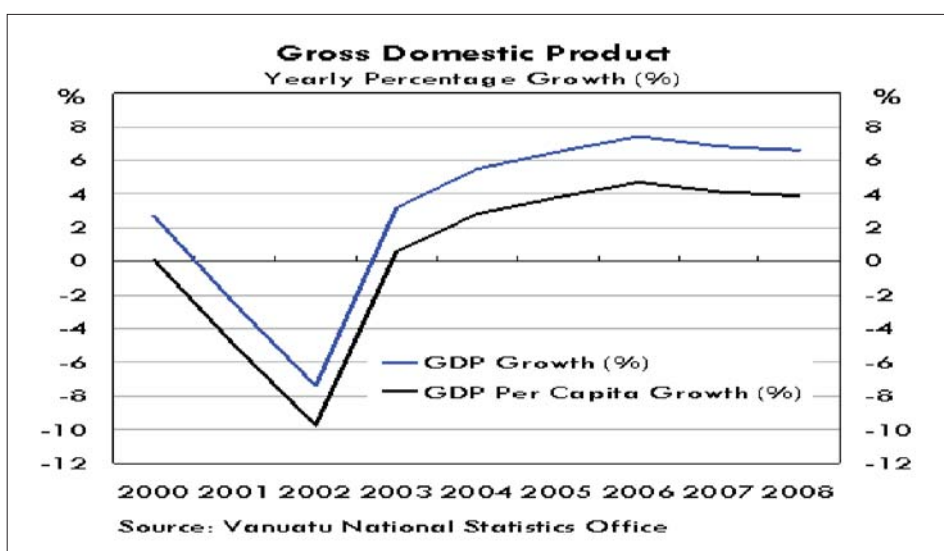
While this paper focuses primarily on Vanuatu, references are made to other PICs for comparative purposes as their demographic pattern may be similar, despite the fact that population sizes vary.

The economic situation

Vanuatu shares economic characteristics with other PICs, having a small, open economy that is vulnerable to natural and price shocks. The Vanuatu economy is also dualistic in nature. About 80% of the population reside in the rural areas and 20% in the urban centres. The livelihood of the rural population is mostly sustained by subsistence farming and some involvement in the cash economy. Some salient statistics from the 1999 census are that the urban migration rate was estimated at 4.2%, higher than the national population growth rate of 2.6%. This growth rate is higher than the Pacific region's population growth rate of 1.9%. The 2009 Vanuatu Household Listings Counts (HLC) revealed that the growth rate has not changed since the 1999 census.

From 2003 to 2008 the economy of Vanuatu grew at an average rate of 6%, resulting in a rising per capita income (Figure 1). This is a huge contrast to the two decades after independence, when growth was slow and income per capita was declining. That dismal performance was attributable mainly to political instability, and weak governance and administration. As a result of this poor performance, the Government of Vanuatu adopted the Comprehensive Reform Program (CRP) in 1997 under the auspices of the Asian Development Bank (ADB). These reforms, coupled with political stability, resulted in a recent higher growth path. With the current global financial crisis, the economy is expected to slow down to around 3%, but is projected to grow stronger by 2010 when the global economy recovers.

Figure1 Economic growth and income per capita



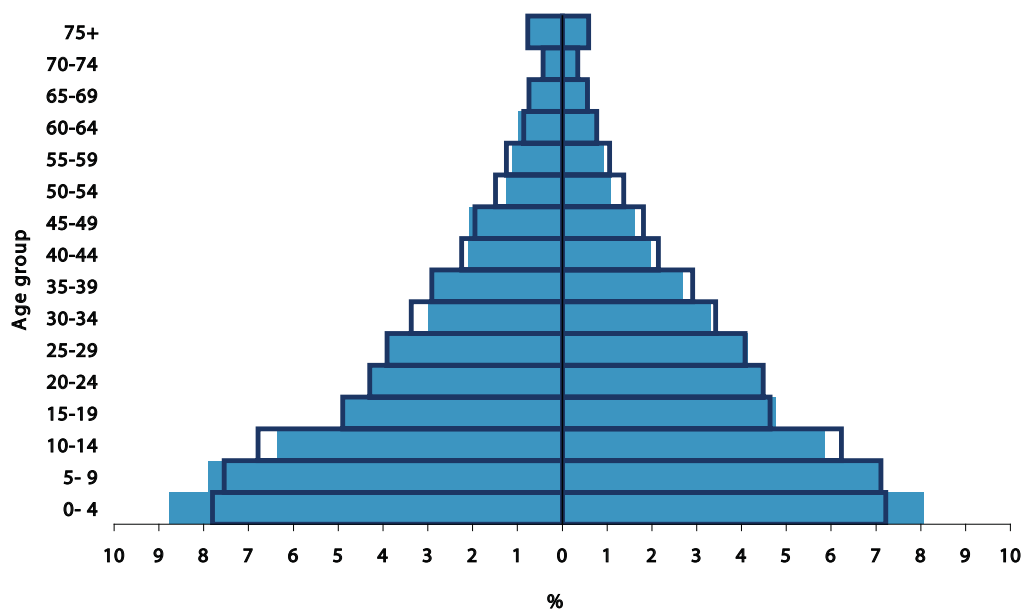
Age structure and labour markets

In the past ten years there have been two population counts in Vanuatu: the 2009 HLC and the 1999 population census. For the purpose of this paper, the analysis will be based mainly on the 1999 census because the 2009 census data are not yet complete. The demographic pattern is unlikely to have changed much, if at all.

Vanuatu has the smallest population in the Melanesian region, similar in size to the population of Samoa. The 1999 Vanuatu census reported a population of 186,678 and the 2009 HLC reported a population of 243,304, of whom 124,737 are males and 118,567 are females. The population of Vanuatu is youthful, as is reflected in the fact that the 15-24 age group constitutes more than 50% of the total population—and this trend will continue (Figure 2). This is consistent with most PICs, where it is estimated that youths comprise approximately 20% of the total population.

As a result of this youthful population in Vanuatu, the dependency ratio is quite high, estimated to be around 68 dependent children and aged persons per 100 in the economically active group. This trend is also consistent with many other PICs.

Figure 2 Vanuatu's Population Pyramid



Source: Secretariat of the Pacific Community, 2009

The 1999 census revealed that the ni-Vanuatu total fertility rate declined from 5.3% to 4.5%, the infant mortality rate declined from 45 to 25 per 1,000 live births and the crude birth rate declined from 37% to 33% per thousand (Table 1).

Table 1 Crude birth rate, total fertility rate and infant mortality rate

	1967	1979	1989	1999
Crude birth rate per 1000	45	45	37	25
Total fertility rate	6.8	6.5	5.3	4.5
Infant mortality rate	123	94	45	25

Source: Vanuatu National Statistics Office

In terms of education, access to primary schooling has increased significantly in the past years. In 2003, approximately 80% of children were enrolled in primary schools compared to only 68% in 1978. There is, however, a considerable gap between urban and rural enrolments—80% in urban areas compared to 70% in rural areas. The quality of education also varies considerably; schools in the urban areas are better and have

more qualified teachers. Post-secondary education failure is high and is a reflection of the shortage of qualified teachers, although the situation has improved in the last few years. At the national level, it is estimated that 25.5% of household heads have never attended school. The dual nature of the education system—English and French—is expensive to run particularly at the post primary levels. This snap shot of education shows the challenges facing Vanuatu.

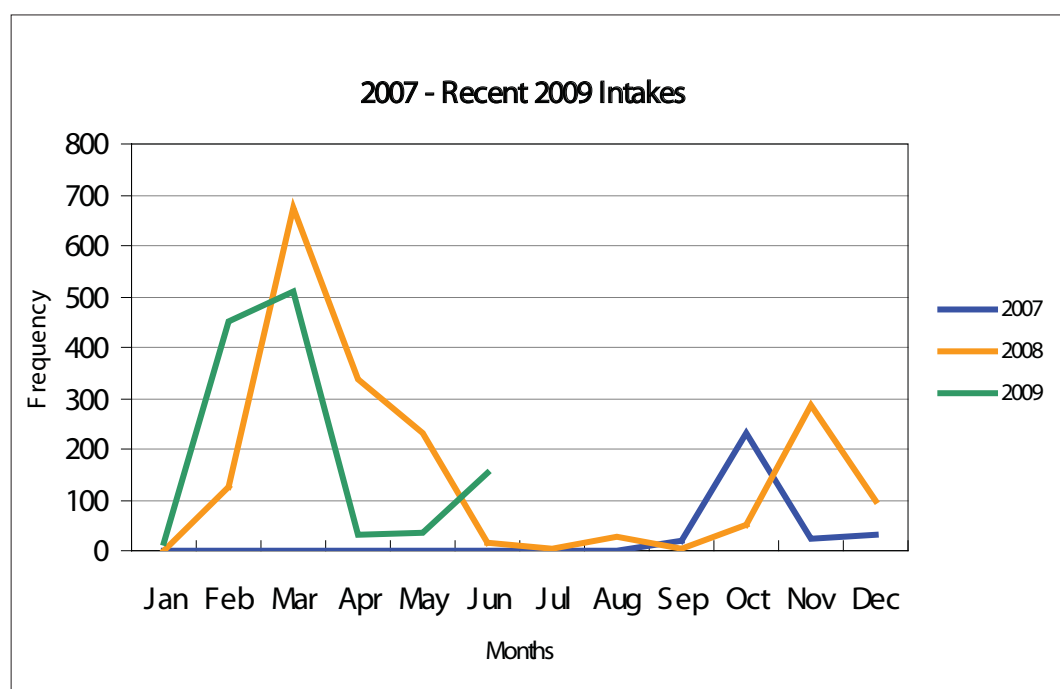
It is estimated that there are over 4,500 school-leavers each year and only 10% are absorbed into the formal labour market. The majority of drop-outs from both primary and secondary schools are absorbed by the subsistence sector, especially in the rural areas. Many rural youths move to urban centres, where those without appropriate skills remain unemployed, and where the crime rate, alcoholism and unsafe sexual behaviour have all increased in recent years.

There are still sufficient opportunities, however, for graduates from tertiary institutions, despite the capacity constraints facing a growing economy. This is consistent with the 2000 Vanuatu Labour Market Survey (LMS) which found that 66% of private sector businesses are unable to find workers with appropriate skills and qualifications. The survey also revealed that 67% of employment in the formal economy is undertaken by males, engaged mainly in manufacturing, construction, transport and communications. Females are engaged in the retail and wholesale sector, and in the hospitality industry. The private sector absorbs 69% of employment in the formal economy, the remaining 31% being employed by the government.

Historically, migration to other countries in the Organisation for Economic Co-operation and Development (OECD) is rare in Vanuatu, especially for unskilled workers. in contrast to other PICs such as Tonga, Fiji and Samoa. Countries in the northern Pacific have open access to the USA, which has an important bearing on remittance flows, employment, dependency ratios and reduction of poverty levels.

Working abroad has been a recent phenomenon in Vanuatu. The first New Zealand Regional Seasonal Employment (RSE) scheme for unskilled workers commenced in late 2007 (Figure 3). The number of unskilled ni-Vanuatu fruit-pickers in New Zealand increased to 2,500 in early 2009 compared to 1,600 in 2008. The demand for this scheme continues to increase, despite the global economic recession.

Figure 3 2007–June 2009 New Zealand regional seasonal workers intake

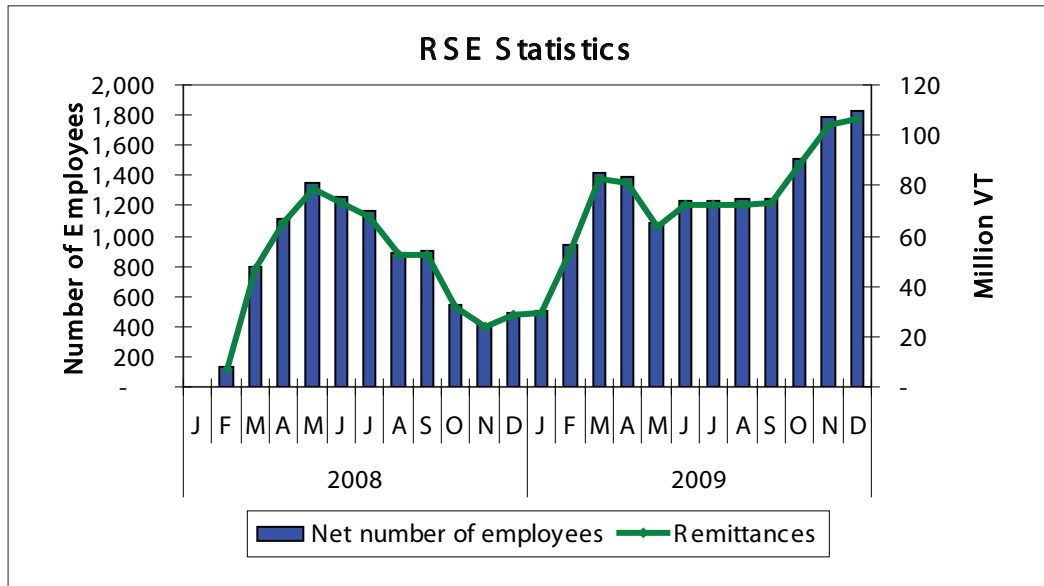


Source: Reserve Bank of Vanuatu

Remittance inflows generated from this scheme continued to increase in 2009 (Figure 4), although the amount is small compared to other PICs who have been involved in this kind of scheme for some time. Recently, the

Australian Government agreed that a limited number of PICs, including Vanuatu, could take part in a similar scheme. In 2009, 50 ni-Vanuatu unskilled workers were initially targeted and until now just over ten workers have been sent to Australia. This is a challenging scheme for Australia, especially when unemployment and migration concerns are confronting the economy in this time of a global financial crisis.

Figure 4 Employees and remittance inflows



Source: Reserve Bank of Vanuatu

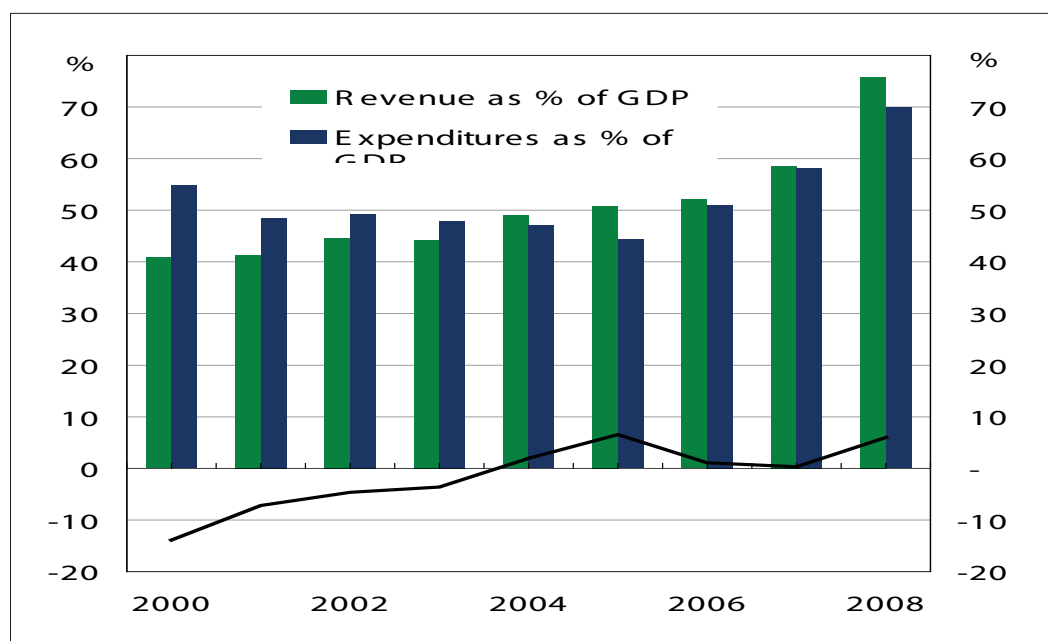
While this scheme is a welcome development, it should not be seen as panacea for employment problems in PICs. Any adverse economic situation, such as persistent high unemployment, in Australia or New Zealand could limit the number of Pacific Islanders going to work in these countries. The underlying challenge for PICs like Vanuatu is to continue to have sustained, broad-based economic growth to absorb the school-leavers each year.

Public finance and poverty

The economy of Vanuatu is small and dualistic in nature, and the majority (80%) of the population reside in the rural areas. This type of economic structure is a major challenge, as the burden of taxation falls mostly on the urban population. Most of the revenue from this population is used to finance development for the whole country, thus stretching the already narrow resources to their limit. Some PICs which share similar characteristics face similar development challenges. Given the narrow revenue base, the development financing gap is matched by the development partners'.

The fiscal situation in Vanuatu was mixed for the two decades after independence. For the first decade, fiscal management was sound until towards the end of the 1990s when the Vanuatu Government faced severe fiscal problems. To address this, the Government adopted the Comprehensive Reform Program which led to a marked improvement in the fiscal situation and, in recent years, the Government was able to record a fiscal surplus (Figure 5). This record is commendable because in any downturn such as the recent global financial crisis, the Government has sufficient fiscal space to respond accordingly. Vanuatu is fortunate to be one of the few PICs in this sound position during these critical times.

As is the case in many PICs, the fact that over 50% of the total population is youthful poses a major challenge in terms of providing adequate education and health services. For Vanuatu, the costs are even more challenging, given that the islands are geographically scattered, the population thinly dispersed and education is provided in both English and French. This is the only Pacific Island country with such a system. Table 2 shows that the unit costs for providing primary and secondary education are quite high.

Figure 5 Fiscal Balance 2000–2008

Source: Reserve Bank of Vanuatu

The cost of providing education and health as a percentage of GDP is over 7% and in terms of total expenditure it is above 30% (Table 3). Over 80% of the education and health expenditure goes on personnel costs and only 20% is on service delivery.

Table 2 School enrollments and unit costs

	2003	2004	2005	2006	2007
Primary	39628	36584	40189	39916	40913
Unit cost (VT)	20494	22635	29933	42028	49323
Secondary	10332	12359	11883	12239	12012
Unit cost (VT)	79850	82648	82999	92840	75461

Source: Vanuatu National Statistics Office

Table 3 Education and health expenditure

	2004	2005	2006	2007	2008
Education expenditure	1,975	1,916	2,390	3,156	3,227
Health expenditure	947	993	1,071	1,390	1,551
Total recurrent expenditure	7,331	7,576	8,659	10,975	11,916
GDP (Nominal GDP)	42068	44394	49888	55906	62769
Education as a % of total recurrent expenditure	26.9	25.3	27.6	28.8	27.1
Health as a % of total recurrent expenditure	12.9	13.1	12.4	12.7	13.0
Education as a % of GDP	4.7	4.3	4.8	5.6	5.1
Health as a % of GDP	2.3	2.2	2.1	2.5	2.5

Source: Ministry of Finance and Economic Management, Vanuatu

In other PICs, total expenditure on health and education is above 25%. A substantial proportion of the budget is focused on social spending, competing with other projects such as the financing of appropriate infrastructure (Table 4).

Table 4 Education and health spending in some PICs

	% GDP Edu	Education % of Govt. Expenditure		% GDP Health	Health % of Govt. Expenditure	
Fiji	5.3	17.1	2002	2.7	8.6	2002
Kiribati	20.5	23.4	2001	12.7	16.1	2001
PNG	2.3	17.5	2000	4.2	9.6	2005
Samoa	4.9	22.6	2001	4	18.8	2001/2
Solomon Is.	3.6	15.4	2000	3.6	11.8	1997
Tonga	6	14	2002	3.5	11.5	2001/2
Vanuatu	5.6	26.4	2001	2.5	12.4	2007

Source: Asian Development Bank

Just like any PICs, the community sense of sharing and caring is prevalent and forms a major part of Vanuatu culture, so there is no absolute poverty or destitution. Subsistence economy continues to play a major part in sustaining community livelihoods for the majority of the population. This makes the definition of poverty challenging. Defining poverty in the context of income alone is misleading for PICs. The ADB defines poverty as hardship, often relating it to lack of or limited access to basic services such as education, health, clean water and food. This definition is applicable to most PICs. A recent report VNSO/ADB/UNDP on poverty in Vanuatu, reveals that the incidence of poverty is more marked in the urban areas, especially in the periphery areas of Port Vila where 32.8% of the population are finding it difficult to meet their basic needs. In the rural areas, the corresponding figure is only 5.1%, due to the dominance of a subsistence life style (Table 5).

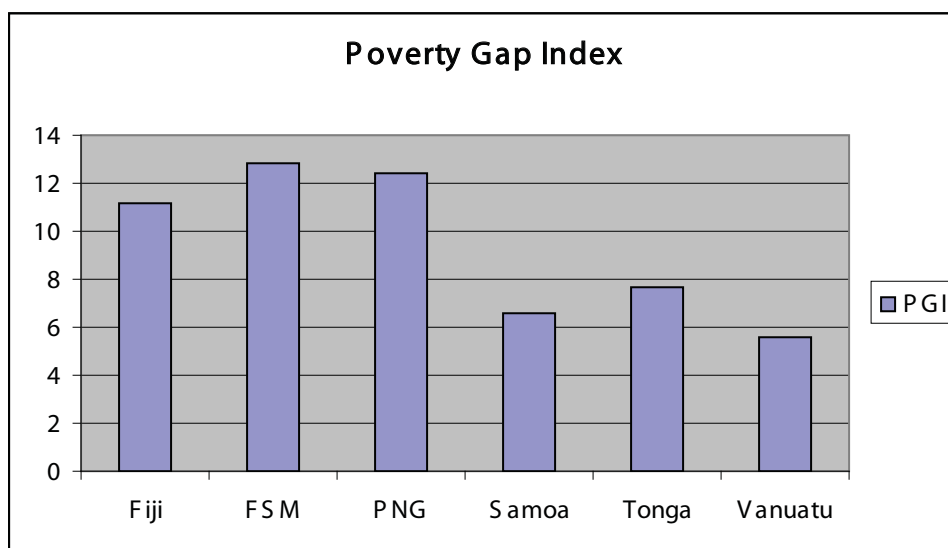
Table 5 Incidence of poverty

Percentage of H/holds and popn with monthly adult equivalent per capita expenditure less than the food and basic needs poverty lines				
	% Households		% Population	
	Food	Basic needs	Food	Basic needs
Vanuatu average	6.0	12.9	7.4	15.9
Rural	5.1	8.5	6.6	10.8
Luganville	2.2	9.2	2.2	10.9
Port Vila	4.7	27.2	5.4	32.8

Source: Vanuatu National Statistics Office

The report also revealed that poverty, as measured by the Poverty Gap Index (PGI) approach which measures the depth of poverty, is comparatively lower in Vanuatu than in some other PICs (Figure 6). However, caution has to be exercised in the interpretation of these data as some may be flawed.

The PGI for Port Vila is 10.4, which is high compared to the Vanuatu index of 5.6. In terms of inequality, the Vanuatu Gini coefficient was estimated to be 0.41. This is the same for the two main urban centres of Port Vila and Luganville. Solomon Islands and FSM Gini coefficients are 0.39 and 0.28 respectively.

Figure 6 Poverty Gap Index for some PICs

Source: Vanuatu National Statistics Office

The Vanuatu Squared Poverty Gap Index, a measure of the severity of poverty, is lower than it is some other countries in the region (Table 6).

Table 6 Squared Poverty Gap Index

	Squared Poverty Gap Index
Fiji	5.1
FSM	6.2
Solomon Islands	3.5
Vanuatu	3.0

Source: Vanuatu National Statistics Office

As discussed above, the incidence of poverty in Vanuatu is highest in Port Vila and is especially associated with uneducated households. Typically, the workers in these households work for the minimum wage, which is around VT25,000 per month. This is quite low when non-food items such as housing rental—which is on average around VT10,000 for this income group—are considered. Moreover, land and house prices have risen since the opening up of the real estate market to the international market, making it difficult for this group to access decent, affordable housing. This is further complicated by increasing numbers of people migrating to urban centres annually. If the migration rate is 4.1%, poverty will rise if the Government does not pay special attention to the needs of the poor.

Conclusion

Most PICs, including Vanuatu, has a youthful population comprising over 50% of the total population. This is a major development challenge for governments. The challenge is more complicated when the urban growth rate is higher than the population growth, as is the case in Vanuatu. It is in the urban areas that the incidence of poverty is growing fast. The Vanuatu Government needs to ensure that economic conditions are conducive to the employment of these youths. While working abroad, especially in the OECD countries, provides a breathing space for employment, it should not be seen as a permanent solution to resolve the employment problems confronting Vanuatu or other PICs. Any adverse shocks, such as the severe economic downturn which resulted in persistent unemployment in the OECD countries, could halt the demand for workers. The best solution for PICs is to have sustained, broad-based economic growth that translates into employment and better development outcomes. This is also important because it will lead to increasing the revenue base to finance education, health and other important infrastructure programs.

With increasing urbanisation, the Vanuatu Government needs to have better urbanisation policies to address the needs of the poor in the urban areas, especially the need for housing and other social services. The burden of taxation falls mostly on the urban population which supports development for the rural 80% of the population. If the development needs are not addressed, social problems will increase.

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The burden and promise of youth: labour supply responses to the youth bulge in Solomon Islands

Denton Rarawa

“We cannot always build the future for our youth, but we can build our youth for the future” Franklin D Roosevelt (1882-1945)

A youth bulge is the demographic term associated with the rapid swelling of the population pyramid amongst the young population. Practically, this phenomenon manifests itself as a large percentage of the population under the age of 25 years. The World Bank estimated that in 2007 Solomon Islands had over 43% of its population in the 0–14 years age bracket. This is well above the 30% usually used as an indicator of a youth bulge (see for example Heinsohn 2003). This demographic transition has occurred in Solomon Islands due to the large decrease in the mortality rate of under five year-olds, which has fallen by approximately 58% since 2000. This trend has not been matched by a comparable fall in the fertility rate, which declined only by approximately 15.5%. This has generated both the youth bulge and the rapid rate of population growth of about 2.5% in 2008.

Solomon Islands is not alone in grappling with this phenomenon. It is estimated that nearly 40% of the world’s population is below 20 years old and approximately 85% of this group live in developing countries (Miller 2003). As Higgins (2003) observes, since the proportion of young people in the population has been falling in both Europe and the Americas since the 1980s and in Asia since the 1990s, growth in the number of young people has been in Africa and the Pacific Island states.

Although not as extreme as the situation in Solomon Islands, many countries in the Pacific region have large populations under the age of 14. For example, in Vanuatu this is estimated to be 38.8%, in Samoa 40%, Tonga 36.8% and Fiji 32.2%. Similar rates of youth bulge occur in Africa, e.g. 47.7% in Guinea-Bissau and 40.8% in Lesotho. This does not mean, however, that Africa and the Pacific Island states face identical situations. Whilst it is inevitable that similarities in experiences and challenges exist, the Pacific Island nations face differing circumstances arising from differences as diverse as the geographic fragmentation and isolation of the region to the relative longevity of the population. For example, a child born in Solomon Islands during 2008 is expected to live 23 years longer than one born in Lesotho at the same time.

Youth bulges have the potential to be a powerful source for good in developing nations but, if mismanaged, they can prove very destructive. In some nations such demographic gifts have been translated into gains in savings, investment and even economic growth (Williamson & Yousef 2002). In less fortunate or less well-governed countries, youth bulges have spawned unemployment, poverty and even violent conflict, such as the conflict in Solomon Islands between 1998 and 2003.

The capacity of labour markets in the economy to absorb additional young population is very important. Labour markets can be stylistically described by individual demand and supply schedules. Understanding the nature of the demand for workers in the economy and the ability of the economy to supply appropriate workers to fill producers’ needs helps us understand the constraints in accommodating new workers.

Education

Education is a crucial supply-side determinant of labour market absorption. On an individual level, education can be seen to increase employability in a number of ways. Becker’s (1964) human capital model holds that education and training increase the productivity of workers, which increases their potential value to a firm. The most visible manifestation of this phenomenon is the higher incomes commanded by those with higher rates of education. Positive Mincerian returns are found across a range of developing and developed economies. Ashenfelter and Krueger (1994), for example, find a wage increase of between 7% and 10% for increasing years of education, using their ‘twin’ experiment to counter any omission bias (especially in relation to unmeasured ability) and the possibility of bias due to the self-selection problem. Angrist and Krueger also find a positive Mincerian return of approximately 7.5% using an instrumental variable approach to counter inherent biases.

The direct relationship between employment and education is, however, less analytically clear. Teal, for example, uncovers a positive relationship between unemployment and the level of education amongst young South Africans. This relationship, however, is reversed among older people. This is explained by the greater

choice available to educated individuals and so could be categorised as voluntary ‘search’ employment, which is usually seen as the long-run benefit of not only the individual but also the economy. This means that damaging long-term unemployment is more closely associated with uneducated individuals. Individuals with very limited education and a small range of employable skills are more likely to be afflicted by structural unemployment, where their skills become redundant. The long-run unemployed may also enter a dangerous negative feedback loop with regard to unemployment and training. This phenomenon, which is often known as hysteresis, occurs as the long-term unemployed lose skills that they previously possessed due to lack of use. The longer they remain unemployed, therefore, the less likely they are to find jobs.

The macro-economic impact of education on labour market absorptive capacity depends on the paradigm adopted. This paper has so far focused on the human capital model, as this is currently seen to be the dominant paradigm and the one best supported analytically. Working within this theory, the benefits to the economy of increased education are an aggregation of individual benefits. Additionally, at a macro-economic level, endogenous growth models, such as AK models, would argue that increasing levels of education in the economy would create rapid economic growth, as human capital is subject to increasing rates of return. High concentrations of productive employees are also a crucial determinant of foreign direct investment. Multinational companies have shown great willingness to move into countries possessing a stock of human capital, with a globalised version of Say’s law seemingly in operation. Bloom (2006) argues that East Asia was best able to attract jobs and so capitalise on its own youth bulge by providing high levels of education to the workforce. Agglomeration economists may also argue that large collections of skills in any country may provide large economies of scale and so even further increase the prospects for growth. The typical example given of an agglomeration economy is Silicon Valley. On a national level, India with its large reserves of mathematicians and computer scientists has created vast agglomerations that have supported the country’s rapid growth.

If, on the other hand, Michael Spence’s (1973) signaling model is the appropriate paradigm with which to examine labour markets, these macro-economic effects would be far less relevant. In the signaling model, education simply acts to counter information asymmetries and reveal the latent ability of an individual to a prospective employer. Positive spill-overs and social benefits to education are far smaller, yet the individual effects of education and the possible draw to foreign investors, who can now easily recognise a pool of talent workers, may endure.

One final point to emphasise regarding education is that, although most research focuses on the effect it has in urban and formal employment, the impact of skills and training is not constrained simply to these areas. Kuepi et al. (2006) illustrate that the impact of education can be clearly seen in the informal sector and Jamison and Lau (1982), Phillips (1994) and Lewin (1996) all demonstrate that literacy and numeracy can generate large productivity gains in rural areas. Both the informal and rural economies are vital areas of labour absorption in Solomon Islands and increasing productivity of the workforce may help to reduce the unemployment and chronic underemployment of individuals in these sectors. This may also have a substantive effect on poverty in the country.

Flexibility

Flexibility is another important requirement for labour markets to possess a high absorptive capacity. In this instance, flexibility is needed in a range of guises. Workers must demonstrate flexibility, both geographical and occupational, in order to locate and secure jobs and markets, and market institutions must display flexibility to ensure continued job creation and preservation.

Occupational mobility is the ability of workers to switch between different sectors of the economy. Such adaptability allows workers in declining sectors to transfer to growing ones easily, and makes potential employees more attractive to firms looking for flexibility in their workforce. Education and training are again key to securing this objective.

Human capital can be split into two categories: transferable skills and firm specific knowledge. In working free markets, the private sector is usually willing to provide firm specific training as this information is non-transferable and there is no potential for ‘competitor capture’. Due to its very nature, however, such training does not enhance occupational mobility. Transferable skills are essential to enable workers to transition more easily among different sectors. These skills are often not provided or are under-provided by the private sector, as they bear the cost of the training whilst other firms that may poach their employees reap the benefit and do so

at very little cost. Governments therefore clearly have a role to correct for the failures in the market and provide transferable skills. This can be especially useful in situations where employees' current skill sets have become, or are rapidly becoming, redundant. Training in this case can help boost occupational mobility and avoid a long-term spell of unemployment for the disaffected worker.

Youth bulges tend to be associated with high levels of migration. One key reason for this is that the young tend to exhibit higher levels of geographic mobility (see work by the new economics of migration school). The ability to move to areas where employment opportunities exist is important for a well-functioning labour market.

In the last few years, Solomon Islands has demonstrated a reasonably high rate of geographic mobility that manifested itself in the form of rapid urbanisation, which has been occurring at approximately 6% per annum, despite several clear barriers to geographical mobility in the country. Information on all but the most elite jobs in other regions is not easily available. This market failure to disseminate information prevents workers finding suitable jobs and makes it more difficult and expensive for employers to hire appropriate workers, as the national labour market is fractionated. Even when information on available jobs does filter out to areas with surplus labour, transportation costs in Solomon Islands are prohibitively expensive and so the national labour market is less physically integrated and people are less able to move around than one would wish. Even where transport can be secured, the price and availability of housing in towns, especially in Honiara, provides a further disincentive to migrate, although informal networks of families and friends in Honiara may be able to overcome many of these barriers (Winters, De Janvy & Sadoulet 2001). Government action to promote greater labour mobility may, however, still make an improvement on increasing geographic mobility from the periphery. By providing information on available jobs nationwide and improving transport links, internal mobility could be enhanced.

An alternative solution to counteract geographic immobility would be to move the jobs to the provinces. This could be achieved through improved transport links and social infrastructure 'crowding in' projects in the provinces. It could also be pursued through programs such as government job creation schemes in the provinces, or wage subsidies.

The final form of geographic mobility that should be mentioned is emigration from Solomon Islands. The net rate of emigration from the country is very low in comparison with many other Pacific Island nations. In 2007, for example, whilst Solomon Islands had only 1% of its population living abroad, Tonga had approximately 50% and Samoa approximately 54%. Worker emigration has provided other nations with valuable employment opportunities, a lucrative stream of remittances, and has acted as a safety valve for tension building up amongst the unemployed. Remittances in 2007 represented over 33% of Tongan GDP whilst the corresponding figure for Solomon Islands was only 4.6%. Net emigration from the population may, however, seriously harm domestic markets and the domestic productive capacity, and remittance flows have not always proved a reliable source of income. Increased emigration, through, for example, admittance to Australia's seasonal worker scheme, might provide useful opportunities for Solomon Islanders if it could be secured.

Conclusion

This paper presents a theoretical case concerning the importance to Solomon Islands of ensuring that the workforce is of a good quality and maintains a high degree of flexibility. This is central to ensuring that the youth bulge the country is experiencing helps rather than harms economic development. Efficient labour supply mechanisms are not on their own sufficient to ensure this. Bahrain, for example, possesses a well-educated youth population both at a primary level, with youth literacy at 99.8%, through to tertiary level. A citizen of Bahrain is expected to receive an average of 15 years of schooling, as opposed to 8.5 years in Solomon Islands. The 31.7% unemployment rate for graduates in the Gulf state, however, demonstrates that the country has failed to integrate them into productive employment, despite a high level of education.

Increasing the demand for labour and promoting job creation is also vital to ensure the integration of young workers into the national economy. Underlying market institutions are vital to provide a framework in which markets can function (North). Social infrastructure is vital to 'crowd in' the private sector and boost economic productivity. The state must carefully avoid burdening the private sector with cumbersome legislation. De Soto argues that prevention of small enterprise start-up through excessive regulation is very damaging to labour creation in an economy. Increasing domestic demand is important to ensure that produced goods have a market, although population increases themselves are often the easiest way to achieve this (Simon 1977). In small open

economies, however, even a rapidly expanded domestic market may not be sufficient and so openness, in its most holistic form (see Wood), is vital to ensure integration with global markets. Bloom (2006) argues that it is the most open economies that have benefited the most from demographic transitions. Informal and rural markets must also be given due and careful consideration. In many developing economies, and certainly in Solomon Islands, these provide not only the greatest current source of employment but also the site of greatest absorption. Legislation must be careful to nurture enterprises in these sectors where they provide valuable employment.

The penalty for failure to integrate a rapidly expanding youth population can be dire. Unemployment is closely tied to poverty, especially where urbanisation is breaking down ties to the land. The erosion of custom law that accompanies migration, combined with high levels of unemployment, is often associated with damaging social issues and crime. The final and most worrisome thought for Solomon Islands is that youth bulges have a long, historical association with violent conflict (Choucri 1974; Moller 1967). Large groups of youth are more easily swayed to violence (Goldstone 2001) whilst unemployment increases the incentives and reduces the opportunity cost and risk of entering into conflicts (Collier & Hoeffler 2000). Although Collier and Hoeffler argue that education actually reduces the likelihood of individuals participating in violent conflict, Kahl (1998) found in Kenya that education inflated expectations and, where these expectations were not met, often due to unemployment, anti-state grievances erupted. This is a stark and important warning for Solomon Islands, given its recent past, and should provide motivation for further study of this demographic transition. The upcoming census in Solomon Islands may provide the opportunity to conduct empirical analysis in this field to complement theoretical research.

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Discussion

- The argument on the dichotomisation of the household and the bedroom and public policy presents some difficulty. It seems that there are a whole lot of intervening variables. We must look at the colonial origins of what is happening today, especially in Papua New Guinea, also Solomon Islands and Vanuatu. That the education system has failed to educate the populations of these countries is a very critical issue. When women are educated there are all kinds of dividends of a different kind. In the case of Fiji in the 1940s–50s, Indian political leaders were asked to please restrain their people from reproducing because demographers were saying the Indian population would completely overwhelm the indigenous population. But that was at the time when the government had done nothing with respect to family planning education, with respect to making education available to the people of the country, and it was also lack of availability of contraceptive technology for ordinary people. I think these intervening variables, particularly education, must be taken on board.
- A Pacific economic bulletin contained a policy paper that raised a lot of the issues discussed here and my concern is that what was talked about was social unrest, particularly after what happened in Honiara and in Tonga. The same is happening in Marshall Islands, for example those we call the lost boys, youths 16–24, largely poorly educated who don't have jobs. In many of our situations this is a very real problem. In Marshall Islands there was an escape valve, which was migration to United States, but this is changing.
- Vanuatu, of all Pacific Island countries, has been receiving maximum investment, largely due to tax haven status. It is doing well, despite low growth prior to 2001. Does government have any control over the technology adopted by investors? Because unless we have some direction for investors, they will not necessarily create the desired employment.
- The issue of demographic dividends should be opened up for wider debate because it captures a particular kind of economy. We in the Pacific have the opportunity to leapfrog over the notion of an economy that relies solely on the kinds of data that we currently collect. We have a wealth of other data that points to other kinds of economies and each presenter mentioned those. They mentioned the care economy and we need to pay attention to how we value components of this economy for the very reasons that they gave. We also have the gift economy, that is very much an important part of our day to day Pacific functions. We really need to interpret demographic dividends through a Pacific lens and look at other types of economies and how they operate. This could all be facilitated if we could disaggregate our data by gender, something called for a long time ago so that we could see different kinds of processes and patterns.
- We need to look at some policy issues on change. For instance, changes in people's behaviour on Nauru when pay metres were introduced for electricity. Power is now provided 24 hours a day but people watch their usage and use has gone down. Another revolution is that people now have mobile phones and credit top-ups are available for as little as 20–30c. Children are buying credit rather than spending their money on lollipops and that is a good thing. These are examples to look at in terms of how you want to change people's behaviour in their bedrooms.
- The Solomon Islands Government is now pursuing policies on increasing its human resources which is reflected in the demand for teaching on the university campuses and the expectation of an increase in the quality of human resources studies graduates in the next five to 10 years. How is this a challenge as far as job opportunities for young people in Solomon Islands?
- Solomon Islands is promoting education very seriously and the question is what do these young educated people do if there are no job opportunities? We have to come up with alternative sources of employment; things people can do. Perhaps that will solve a lot of the problems.

- It is time we stopped blaming people from years ago for the ills we face today. There are all kinds of serious problems in store for our countries that we should prepare for, countries that seem to be doing well. This session was to point to what could be in store for us, what directions we are going, and what it means for ministers of finance and education. People are saying 'isn't it time you had a Pacific Island curriculum, on economics and so forth.' This has been said for 30 years now and where is it? The facts that we are forced to present to our people are very basic, fundamental things that are not going to change in the next seven years. We ignore them at our peril. We could behave the way we have done and not take on board our concerns, or we could actually do something differently that could make the lives of our people a little bit better.
- It seems that in the Pacific, particularly those areas that depend on subsistence production, have a problem in that more children are an asset. Yet in the cash sector it is a liability. Vanuatu is one of the few countries that has focussed on the actual relationship between the subsistence sector and cash sector and has declared a year of the traditional economy with focus on improving productivity in the traditional economy. There has to be more non formal education and skills development including sex education and life skills for actual planning. Family planning seems often a euphemism for contraception, but many people think it means actually how to plan a family, how many children to have and how to pay for them. If some of that was included in general education it might be more able to address the issues.
- Change the policies to suit the country and give money to the grass roots people so that this staggering figure of unemployment can be solved. We need people to come up with bold policies. Let us do something revolutionary that is going to solve the problems.

Plenary 3

The ageing population in Pacific Island countries and implications for public policy

Geoffrey Hayes

Keynote address

**Population ageing in the Pacific Islands:
addressing the challenge of an ageing population
in three Pacific countries**

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Vasemaca Lewai

**Population ageing in Fiji: current trends and
challenges**

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The International Conference on Population and Development

Program of Action on elderly people¹

Objectives:

To enhance through appropriate mechanisms the self-reliance of elderly people, and to create conditions that promote quality of life and enable them to work and live independently in their own communities as long as possible or desired;

To develop systems of health care as well as systems of economic and social security in old age, where appropriate, paying special attention to the needs of women;

To develop a social support system, both formal and informal, with a view to enhancing the ability of families to take care of elderly people within the family. (Para 6.17)

Actions:

All levels of government in medium- and long-term socio-economic planning should take into account the increasing numbers and proportions of elderly people in the population... (Para 6.18)

Governments should seek to enhance the self reliance of elderly people to facilitate their continued participation in society... (Para 6.19)

Governments, in collaboration with non-governmental organisations and the private sector, should strengthen formal and informal support systems and safety nets for elderly people and eliminate all forms of violence and discrimination against elderly people in all countries, paying special attention to the needs of elderly women. (Para 6.20)

Key actions for the further implementation of the ICPD program of action

Support research and develop comprehensive strategies at the national, regional and local levels to meet, where appropriate, the challenges of population ageing. (Para 21(c))

1 http://www.unfpa.org/webdav/site/global/shared/documents/publications/2004/icpd_eng.pdf

Population ageing in the Pacific Islands: addressing the challenge of an ageing population in three Pacific countries

Geoffrey Hayes

Introduction

The challenge of ageing

Classical treatments of the population problem focused simply on population growth. In Malthus' formulation, population growth continued until it was 'checked' by limits to the food supply, thereby raising mortality across all age groups. Neo-classical treatments focused on the limitations of resources, either natural or human. It was the destiny of countries in the 'low-level equilibrium poverty trap' to remain in a perpetual state of poverty unless they could find some way to accelerate economic growth to the point where it was economically advantageous to have fewer children or to control the rate of population increase by some form of socio-cultural innovation. In the neo-classical formulation, high youth dependency ratios diverted resources away from the accumulation of productive capital to the support of children, thus preventing growth in per capita income. Life expectancy under such conditions was presumably low or moderately low, and the shape of the age structure remained virtually unchanged—what demographers labeled the 'stable population'.

What later became known as the 'demographic transition' started out simply as a private and public effort to reduce human misery caused by infectious disease and premature death. As more children survived to adulthood due to health innovations, fewer births were needed to provide support for the parental generation, thus providing an incentive to limit the number of births by whatever means were available. The fertility 'transition' has followed the mortality transition wherever it has occurred, although the speed of the decline has varied from country to country according to circumstances that are still not fully understood.

The inevitable result of declining mortality and fertility has been a historically unprecedented change in the distribution of populations across age groups. The social and economic implications of this change were not anticipated by classical treatments of the relationship between population and development. Certainly, even neo-Malthusian approaches to population growth—that is, the single-minded focus on family planning as a means of reducing the number of births—could not have imagined that they might be so successful that fertility rates would drop below the level needed to maintain the population size. Prolonging life through medical technology and the adoption of a health-oriented personal life-style has also been spectacularly successful, and further advances are predicted in future.

Population economics has thus turned its attention away from the issue of rapid population growth and the brake that youth dependency places on the pace of economic growth toward an analysis of age structures as such. The underlying neo-classical economic-demographic theory exemplified by Coale and Hoover's (1958) study remains relevant; what has changed is that, given rapid fertility decline over many decades, it is now possible to demonstrate empirically with actual examples that reduced youth dependency provides a boost to economic growth and allows countries to break out of the poverty trap.

The so-called demographic window of opportunity refers to the historical period when both youth and old-age dependency place the lightest possible burden on the working age population. The population under 15 has declined to its lowest level due to declining fertility over several decades; on the other hand, the elderly population has not begun to rise rapidly as the benefits of longevity are still accruing to the working age population, which continues to grow. During this period, the economy receives a demographic bonus because income that would otherwise be spent on raising and educating children, or supporting unproductive older people, is freed-up for capital investment. Capital investment increases the capital to labour ratio and makes existing labour more productive, while also helping to absorb any remaining surplus labour into the labour force. Taken together, these processes are said to account for 30% of economic growth in some South-east Asian countries.

Eventually, however, the increased longevity of working age persons extends into the older, non-working age groups, thus increasing the aged dependency ratio and once again placing a burden on the working-age

population. Statistically, the dependency ratio starts to rise through time until it reaches a similar level to youth dependency before the fertility transition. While the numbers may look similar, as a social, economic and cultural phenomenon, however, a high aged dependency ratio has very different social and economic implications than does a high youth dependency ratio.

Some authors, e.g., Mason and Lee (2004) have argued that ageing provides a second 'demographic bonus' that can significantly decrease the economic burden on the working-age population that follows from population ageing. If, during their working lives, the working-age population anticipates its own retirement and accumulates capital, either individually or by governments on their behalf, then the investment of that capital will result in 'capital deepening' and more rapid economic growth. On the other hand, if individuals accumulate only 'transfer wealth', i.e., a claim against future generations, then either governments or family members will be required to pay pension benefits from current taxation or income and there will be no second demographic bonus. Family systems create transfer wealth for current generations and debt for future generations, just as public pension systems paid out of current taxation do.

These issues may seem to be remote in the Pacific region because of two well-known 'facts': 1) Pacific Island populations remain youthful, unlike in developed countries which are ageing fast; 2) in the Pacific, the extended family looks after its elderly, so formal social security systems are not as important as they are in the industrial countries where the family is socially less important or is small in size. Unfortunately, these 'facts' are only half-truths. Firstly, some Pacific Island populations are ageing rapidly and actually at a faster pace than was the case in the industrialised countries when they passed through the demographic transition. Secondly, most, if not all, Pacific Island countries have developed some form of pension or provident fund system to provide social protection in old age, at least to some groups. Thirdly, anecdotal reports of elderly neglect or even abuse on the part of family members are widespread throughout the Pacific, as they are in other world regions. The obligation to care for one's parents and grandparents is no doubt sincerely felt and remains a strong cultural value, but there is also reason to believe that family systems are experiencing strain as a result of migration, urbanisation, family dispersion and culture change.

It follows from these observations that some Pacific Island societies are already facing or will sooner or later have to face much the same challenges that come with an ageing population as other societies that have passed through the demographic transition.

Ageing and public policy

Ageing is a universal process that all populations that have passed through the various components of the demographic transition will experience; but the way in which social systems deal with the challenge of ageing depends on the nature of the institutional structures that exist in each society to support those who may not be able to fully support themselves. The challenge represented by ageing arises from the fact that the older population is much more likely to be sick, infirm or disabled than children, young people or the middle-aged. Sickness, infirmity and disability diminish the ability of the old to provide for their own subsistence or to earn an income. Although these are not inevitable features of growing old, it is normally the case that maintaining productive capacity into old age, as well as ensuring a satisfactory existence, requires increasing expenditure on health-care, both at the individual level and for society as a whole.

In 'stateless' societies, such as those that prevailed in the Pacific prior to contact with the outside world, the care of the elderly was an accepted responsibility of kin-groups such as the immediate or extended family. In some cultures, kinship terminology appears to have evolved so as to enlarge the size of the social group with which individuals identify and within which some form of assistance or support can be expected. The evolution of the nation-state further enlarges the size of the group from which the dependent population can expect assistance and support, but the basis of that support is increasingly depersonalised, formal and bureaucratic. Although kinship systems remain strong and are central to social life in the Pacific, all Pacific people are now members of nation-states, and it is the governments of nation-states that have taken on or been given the obligation to address the needs of the elderly.

As in other world regions, an assessment of the capacity of societies in the Pacific to address the challenges of an ageing population must consider the relative contributions of kin-based and nation-state institutions and their evolving interaction with each other. Of course, this conceptualisation is too simplistic to reflect the complexities of modern societies, even in the small countries of the Pacific. Other institutions are present in varying degrees,

including civil society (which may be said to include churches and non-government organisations [NGOs]) and capitalist institutions such as markets. A complete analysis of the institutions actually and potentially involved in the care and support of the elderly population would need to consider the role and function of various organisations, including those that are intermediate between family and state. Furthermore, many of the institutions associated with the care of the elderly have international dimensions. An increasingly important feature of modern society is that individuals may be members of more than one nation-state and have the right to draw upon the support of states other than the one in whose territory they reside. This extra-territoriality may also be found within civil society, e.g. in international charities, or organisations of professionals (doctors and engineers) or business executives.

There is also a significant international dimension that involves nation-states themselves and their relations with other nation-states. On the one hand, intergovernmental and international organisations play a role by providing technical assistance and policy guidance to developing countries to assist them to address ageing and its effects; on the other hand, agreements between nation-states, whether formalised or not, may involve the provision of services across national boundaries, even where there is no common citizenship or nationality. An example of the latter type of arrangement is medical referral schemes whereby nationals of one country can obtain treatment in another, better-equipped country.

In so far as international policy guidance is concerned, the current framework with regard to ageing is the Madrid International Plan of Action on Ageing (MIPAA), adopted at the Second World Assembly on Ageing held in 2002, along with its regional implementation strategies. The overall aim of MIPAA2 is to “...ensure that persons everywhere are able to age with security and dignity and to continue to participate in their societies as citizens with full rights”. The main policy recommendation of the MIPAA is that the issue of ageing should be incorporated within the social and economic policies, strategies and actions of countries, including poverty reduction strategies and plans. Older persons should be full participants in development processes and share in its benefits. Public policy should focus on the elimination of the barriers that prevent older persons from participating in social, cultural and economic activities. Given that ageing is occurring at a rapid rate in some countries, it follows that the contribution of the older population to development will increase in the future and impediments to their participation should be removed to the maximum extent possible.

Focus of this paper

This paper reports on some results of a larger research project supported by UNFPA on the social and economic consequences of population ageing in the Pacific Islands. The purpose of the larger study is to assist the governments of the region to understand the scale and extent of population ageing where it is occurring and to contribute to policy dialogue at national and regional levels. An understanding of likely future patterns of ageing will assist the countries of the region to address the policy implications of an ageing population.

As a perusal of the MIPAA will show, addressing ageing at the policy level is complex and multi-dimensional. The present paper does not attempt to outline the extent to which Pacific governments are aware of or have implemented the MIPAA, but rather it attempts: (1) to examine the institutional arrangements in three selected countries (Fiji, Marshall Islands, Samoa) by means of which governments and other institutions are, or potentially could, address the issues arising from a rapidly ageing population; (2) to take a first look at what social protection systems are currently in place and to consider how these systems might be affected by an acceleration in the pace of ageing; and (3) to propose some recommendations on how Pacific governments might more effectively address ageing at the national and regional level. The paper does not purport to describe the actual conditions of life among the elderly in the Pacific—a task that would require substantial research.

The broader research project of which this paper is a part, aims to provide answers to the following:

1. Does the country have a national coordinating body to address ageing issues, as recommended by the MIPAA?
2. What form of social security is in place for the elderly aside from the family or kin-group?
3. What proportion of the population is covered by formal social security arrangements in old age?
4. What are the implications of ageing for existing social security arrangements, particularly the impact on government expenditure?

2 http://www.un.org/esa/socdev/ageing/madrid_intlplanaction.html

5. What is the scope for expanding social protection in old age to those groups that are not covered under present arrangements, especially the impact on government expenditure?
6. Aside from income plans, do the elderly receive benefits or subsidies with regard to health-care, transportation, disability or mobility that improve their quality of life?
7. Are there any recent studies of the living situation of the elderly, especially the extent to which the elderly may be vulnerable to poverty?
8. Is ageing addressed in sector plans or in a national population policy?

The present paper focuses mainly on questions (1) through (5). The sources of information include: (i) direct interviews with officials in each of the three countries (including health and social welfare, pension fund managers, NGOs and church ministers); (ii) annual reports of provident funds or social security administrations; (iii) other studies of social protection; (iv) simulation exercises using population projections combined with various types of economic data.

The selection of the countries included in this paper was based on a combination of pragmatic considerations and a desire to include one country in each of the sub-regions of the Pacific. These are not necessarily the countries that are ageing the fastest, although Fiji and Samoa belong in that category. It is also not assumed that these countries represent the situation that exists in other countries in the sub-region, but certain similarities and contrasts are apparent. The Marshall Islands Social Security System, for example, is very similar to the systems in existence in Palau and the Federated States of Micronesia (FSM), as all of these systems are based on the US social security arrangements that were put in place prior to the dissolution of the Trust Territory. The study has drawn on the experience of these countries to highlight the challenges of maintaining a viable social security scheme for the elderly that is not fully-funded. Similarly, Samoa and Fiji have provident fund arrangements that are common in other countries that were previously administered by the British or their commonwealth off-shoots (Australia and New Zealand). On the other hand, there are lines of contrast as well: Samoa and the Republic of the Marshall Islands (RMI) have stronger links to their former metropolitan centres (New Zealand and the United States, respectively) whereas Fiji's links to its former administering power are perhaps more emotional and symbolic than material and practical.

A common feature of all three countries is that international migration plays a major role in demographic, social and economic processes, including ageing. Although each country has its own particular patterns of migration, the fact of these patterns makes it equally difficult to foresee the impact of ageing in the future. This is partly because migration flows are unpredictable, and partly because detailed statistics on migration among the elderly, such as population projections, are lacking.

The following section provides a brief overview of the projected trends in population ageing in the Pacific Islands region as a whole and in individual countries. Next there is a comparison of the ageing situation in each of the three countries selected for the present study, followed by consideration of the issue of coordinating bodies and national capacity to address ageing in these countries. After this is a discussion about old age social protection arrangements in each country and the implications of an ageing population for extending or modifying these arrangements. The last section provides some conclusions and recommendations.

Overview of population ageing in the Pacific

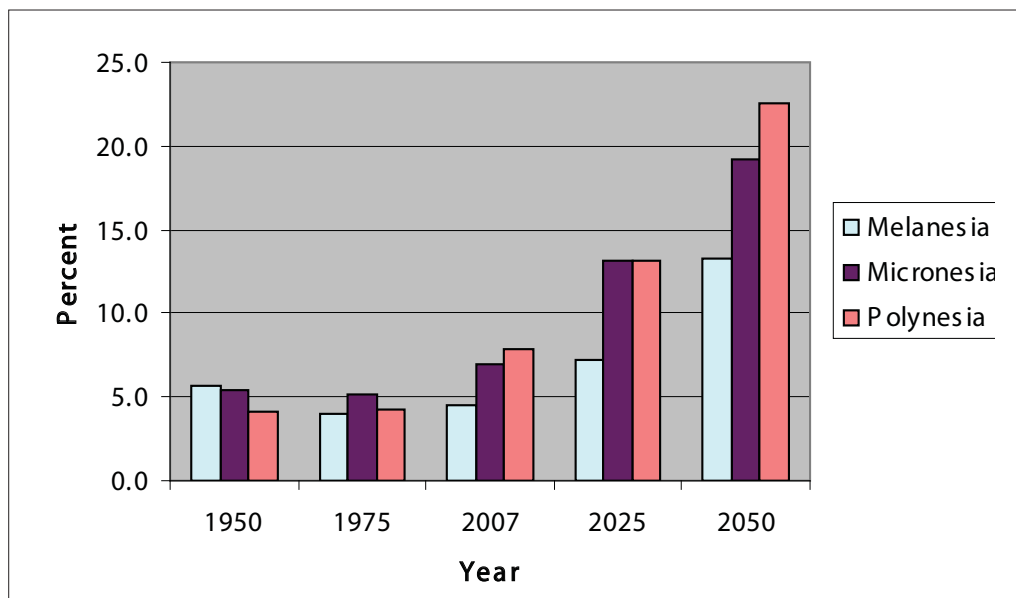
Ageing at sub-regional levels

Past and expected future trends in ageing are similar to other less developed regions of the world, with little ageing evident in the second half of the 20th century and an accelerating pace of ageing occurring in the first decade of the 21st century and beyond (Table 1 and Figure 1). In Micronesia and Polynesia the historical and projected patterns of change are similar to general world patterns, while Melanesia lags well behind because of its late entry into the demographic transition. By 2050, 22.5% of the population of Polynesia and 19.2% of the population of Micronesia will be 'old', defined as the population aged 60 years and over. Only 13.1% of the population of Melanesia will be old by 2050, but this is double the proportion of 25 years earlier.

Table 1 Percentage of population aged 60 years and over, by Pacific sub-region, 1950–2000 and projected to 2050

Sub-Region	1950	1975	2000	2025	2050
Melanesia	5.7	4.0	4.5	7.2	13.3
Micronesia	5.4	5.1	5.7	13.1	19.2
Polynesia	4.1	4.2	7.1	13.1	22.5

Source: UNDESA (2007); UNFPA (2009)

Figure 1 Percentage of population aged 60 years and over, by Pacific sub-region, 1950–2000 and projected to 2050

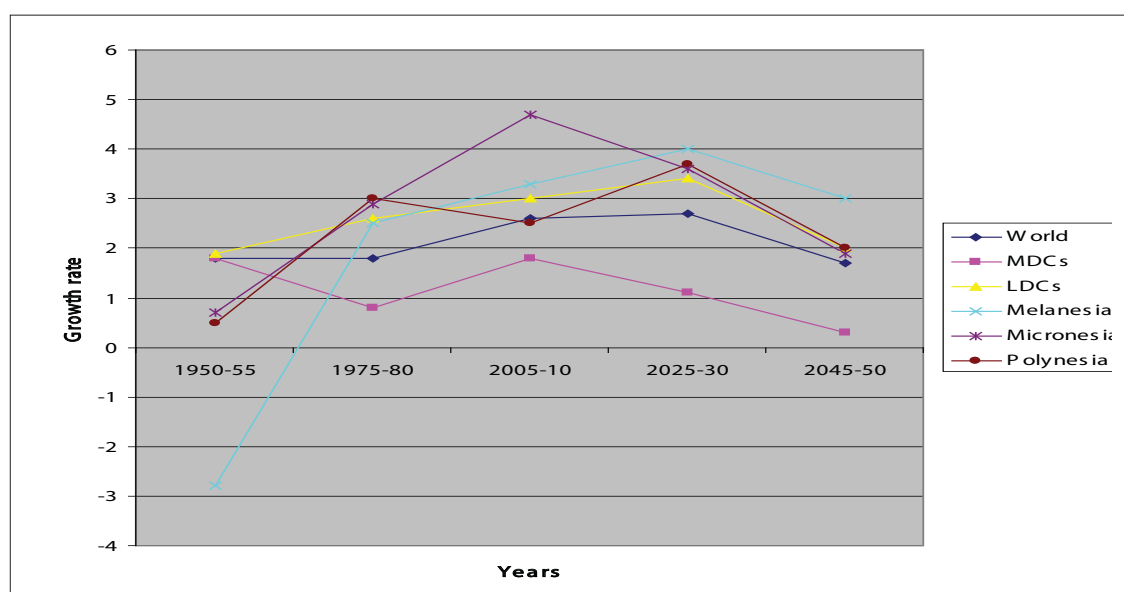
Source: Table 1

The speed at which populations are ageing is clearly important from a policy perspective because of the long lead-time needed to establish or strengthen social protection systems. The pace of ageing in the Pacific was already above the world average in the late 1970s (Table 2 and Figure 2) and is now beginning to accelerate further. In Micronesia, the current rate of growth in the elderly population (4.7% per annum) is well above global or less developed country (LDC) levels. In Melanesia, the peak rate of growth in the elderly population will not occur until the 2025–30 period, when it is expected to reach 4.0% annual growth. This will also be the peak period for Polynesia.

Table 2: The pace of ageing annual growth rate of 60+ population: 1950–2050

Region	1950–55	1975–80	2005–10	2025–30	2045–50
World	1.8	1.8	2.6	2.7	1.7
MDCs	1.8	0.8	1.8	1.1	0.3
LDCs	1.9	2.6	3.0	3.4	2.0
Melanesia	-2.8	2.5	3.3	4.0	3.0
Micronesia	0.7	2.9	4.7	3.6	1.9
Polynesia	0.5	3.0	2.5	3.7	2.0

Source: UNDESA (2007)

Figure 2 The pace of ageing annual growth rate of 60+ population: 1950–2050

Source: Table 2

Given these rapid rates of growth, the elderly population of the Pacific can be expected to increase by about 600%—from 376,000 in 2000 to over 2.2 million by 2050. A total of 1.7 million elderly will be added to the population of the Pacific by 2050. About 90% of these will be in Melanesia, as this is where the vast majority of the Pacific's population lives. In Micronesia and Polynesia, the number of elderly people will increase by about 100,000 in both sub-regions (Table 3).

Table 3 Projected number of people 60 and over in the Pacific by sub-region, 2000-2050

	2000	2010	2020	2030	2040	2050
Melanesia	304,447	403,940	606,133	951,046	1,389,473	1,975,293
Micronesia	28,355	39,715	64,815	95,293	110,555	129,167
Polynesia	43,364	56,967	81,304	110,094	120,833	144,404
Total	376,166	500,622	752,252	1,156,433	1,620,861	2,248,810

Source: UNFPA (2009)

As population ageing proceeds, the proportion of the 'oldest old' (80 years of age and over) can also be expected to increase. In the Pacific, rapid increases in this age group can be expected in the coming decades (Table 4). In Melanesia, this age group will be increasing at the rate of 5.4% annually by 2025, and the rate of growth will still be 4.8% per year two decades later. Both Micronesia and Polynesia will have rapid increases in this age group through to 2050. These rapid growth rates are shown in Table 5, which shows that the population aged 80 and over will increase from about 19,000 in 2000 to 266,400 by 2050.

Table 4 Growth rate of the population 80 years of age and over, 1950-2050

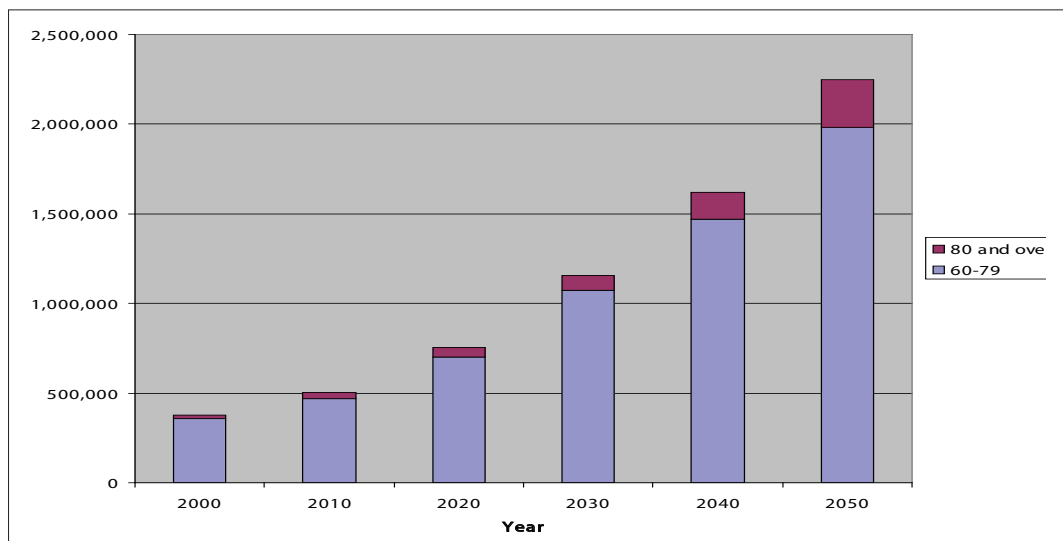
Region	1950-55	1975-80	2005-10	2025-30	2045-50
World	3.1	2.7	3.9	3.8	3.0
MDCs	3.2	3.6	3.3	3.1	1.0
LDCs	2.9	1.4	4.6	4.4	3.9
Melanesia	2.5	2.5	2.8	5.4	4.8
Micronesia	-2.6	4.7	3.9	7.1	3.7
Polynesia	-1.0	2.1	3.5	3.2	4.3

Source: UNDESA (2007)

Table 5 Projected population 80 years and over in the Pacific, by region, 2000–2050

	2000	2010	2020	2030	2040	2050
Melanesia	14,782	24,805	38,155	63,248	118,425	223,352
Micronesia	1,912	3,248	4,691	7,952	13,964	20,115
Polynesia	2,193	5,247	7,681	11,134	17,900	22,966
Total	18,887	33,300	50,527	82,334	150,289	266,433

Source: UNFPA (2009)

Figure 3 Projected population 80 years and over in the Pacific, by region, 2000–2050

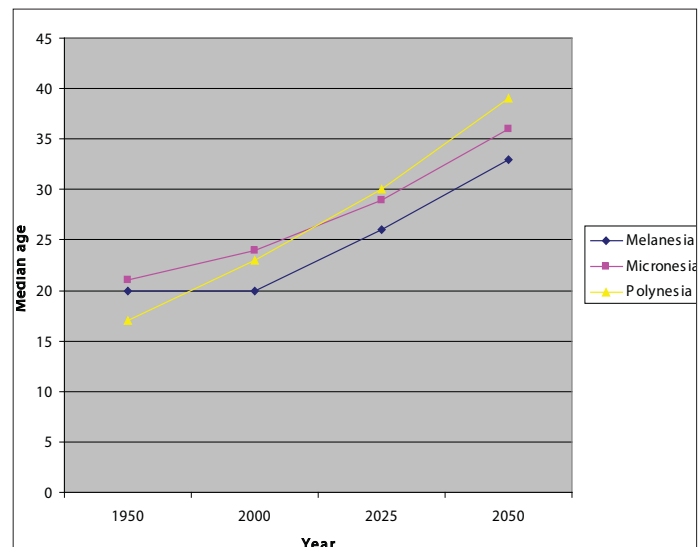
Source: Table 5

Finally, it is clear from Table 6 and Figure 4 that the median age will rise steadily over the next 50 years, with Polynesia reaching 39 years by 2050—above the world average and somewhat above the level of the more developed countries (MDCs) in 2000.

Table 6 Trends in the median age, by region, 1950–2050

Region	Median age (years)			
	1950	2000	2025	2050
World	24	27	32	36
MDCs	29	37	44	46
LDCs	21	24	30	35
Pacific Islands				
Melanesia	20	20	26	33
Micronesia	21	24	29	36
Polynesia	17	23	30	39

Source: UNDESA (2007); UNFPA (2009)

Figure 4 Trends in the median age 1950-2050

Source: Table 6

Ageing at country level

Table 7 Percentage of older persons in Pacific Island countries 2000-2050

Country	Percentage of older persons (60 years and over)		
	2000	2025	2050
(1) Palau	7.8	23.3	24.9
(2) Niue	14.5	21.1	21.3
(3) New Caledonia	8.6	18.2	24.1
(4) NMI	2.7	17.8	22.9
(5) French Polynesia	7.3	16.2	23.3
(6) Guam	8.2	15.4	22.0
(7) Cook Islands	10.0	15.5	22.8
(8) Tuvalu	8.6	14.6	17.4
(9) Wallis and Futuna	7.7	14.4	23.0
(10) Fiji	6.0	12.6	16.6
(11) Samoa	6.5	12.1	20.3
(12) FSM	5.3	10.2	16.2
(13) American Samoa	5.4	11.2	14.2
(14) Tokelau	9.0	11.1	16.2
(15) Tonga	7.9	9.7	12.6
(16) Kiribati	5.4	8.2	18.4
(17) Nauru	2.6	7.9	13.4
(18) Vanuatu	5.0	7.6	12.4
(19) Marshall Islands	3.4	6.4	11.6
(20) Papua New Guinea	4.0	6.1	11.3
(21) Solomon Islands	5.0	5.9	11.0

Source: UNFPA (2009)

The extent and pace of ageing at country level depends on the historical trends in fertility and mortality change, including their pace, timing and effectiveness. The mortality transition accelerated after World War II when large-scale public health programs were launched to deal with the common infectious diseases. By the 1960s these programs were so successful that rapid population growth was evident and public health programs turned their attention to family planning, initially in Fiji and later to other countries. Governments preferred family planning to be provided by NGOs rather than directly through a government department, but this changed in later years. In a number of countries, the total fertility rate (TFR) did not peak until it had reached over seven lifetime births per woman in the 1970s, whereupon it started to decline quite rapidly.

Using the projected proportion of the population aged 60 and over in 2025 (Table 7) the most aged populations over the next 15 years will be Palau, Niue, New Caledonia, Northern Mariana Islands, French Polynesia, Guam and Cook Islands. These countries, along with Wallis and Futuna and Samoa, will have more than 20 % of their populations aged over 60 by 2050.

Ageing of the older population

The older population is itself ageing, as is common in most developing regions. In most Pacific countries, the projected rate of growth of the oldest old population is currently higher than the rate of growth in the older population as a whole (Table 8) and this is expected to continue for the next several decades. Tokelau Islands, Northern Mariana Islands, Samoa and Niue are among the countries projected to have a high proportion of their older population in the oldest old group.

Feminisation of the older population

Given that female life expectancy is higher than male in most countries, the older population is almost certain to be dominated by women, unless migration is selective of older females, which is unlikely. As Table 9 indicates, the sex ratios for the 60 and over age group are projected to be under 100 through to 2050 and a majority of the old will be female. However, feminisation of the old is not as pronounced in the Pacific as it is in some Asian countries.

Table 8 Rate of growth of the oldest old by country and sub-region

Country	Rate of growth of the oldest-old population (annual % increase)				
	2000–2005	2010–2015	2020–2025	2030–2035	2040–2045
Melanesia					
New Caledonia	1.5	4.3	5.2	4.1	3.4
Vanuatu	-2.0	4.1	5.4	5.4	5.5
Solomon Is.	18.0	4.1	4.4	4.4	6.7
Fiji*	0.0	4.9	5.3	5.0	3.4
Papua New Guinea	6.0	4.7	4.7	6.4	7.0
Micronesia					
Guam	5.9	5.4	3.1	4.5	3.9
NMI	1.3	8.6	7.2	8.6	5.9
Nauru	2.5	7.5	8.1	8.3	5.3
Kiribati*	0.0	5.3	3.3	5.3	5.7
Marshall Islands	19.0	1.5	3.3	6.7	2.7
Palau*	0.0	-.09	3.2	7.2	4.5
FSM	-1.8	2.3	1.4	7.6	1.5
Polynesia					
Niue	0.0	7.3	-2.0	5.9	0.8
French Polynesia	4.1	5.4	4.8	5.8	4.3
Cook Islands	5.5	5.0	2.1	1.8	3.7
Tuvalu	5.6	1.1	0.2	5.2	2.0
Wallis and Futuna	4.5	5.0	6.2	2.6	1.8
American Samoa	2.4	4.3	4.3	5.5	4.1
Samoa	0.0	2.8	2.5	5.1	4.0
Tonga	18.3	2.6	2.2	2.2	0.7
Tokelau	5.8	1.7	2.4	1.5	1.2

* A growth rate of zero is a function of the base population lacking a breakdown of the 80 and over age group.

Source: UNFPA (2009)

Summary conclusion on ageing trends in the Pacific

Ageing is occurring throughout the Pacific but there is a great deal of variation in the current extent of ageing and the speed with which the populations of the region are becoming old. Given that population ageing is primarily a consequence of the demographic transition from high to low fertility and mortality, it is not surprising that the countries that are the most advanced in the transition are the ones that already have a significant proportion of their populations aged 60 years and older and a growing proportion aged 80 years and over.

The ranking of countries on the ageing indicators used in this study is not consistent across all indicators, in part because the direction and extent of international migration and the current distribution of the population by age has a confounding influence. What is clear, however, is that some countries consistently rank high on most indicators while others rank low. The countries that rank high, meaning that ageing is already significant and in which ageing is likely to continue rapidly, include Niue, Tokelau Islands, Cook Islands, New Caledonia,

Palau, and Guam. Aside from the fact that these are countries that have been passing through the demographic transition for many decades, these are all countries experiencing significant international migration. In the case of New Caledonia and Guam, the net flow of migrants is inwards (immigration); for the other countries the net flow is outwards (emigration).

Table 9 Indicators of feminisation of the old in Pacific Island countries 2000-2050

Country	Sex ratio of population aged 60 years and over			Proportion of the 60 and over population that is female		
	2000	2025	2050	2000	2025	2050
Melanesia						
Vanuatu	121.6	91.3	89.1	45.1	52.3	52.9
New Caledonia	91.8	88.8	89.5	52.2	53.0	52.8
Fiji	90.9	81.6	87.3	52.4	55.1	53.4
Papua New Guinea	124.8	87.6	92.0	44.5	53.3	52.1
Solomon Islands	119.8	98.1	93.6	45.5	50.5	51.6
Micronesia						
Kiribati	70.5	73.5	79.1	58.6	57.6	55.8
NMI	113.0	143.4	82.4	46.9	41.1	54.8
Marshall Islands	93.8	84.7	88.0	51.6	54.2	53.2
Nauru	112.3	78.7	88.1	47.1	56.0	53.2
Palau	80.7	119.6	94.5	55.3	45.5	51.4
Guam	93.0	90.8	96.5	51.8	52.4	50.9
FSM	86.4	89.4	99.8	53.6	52.8	50.0
Polynesia						
American Samoa	92.9	83.0	85.3	51.8	54.7	54.0
Cook Islands	104.9	90.4	85.8	48.8	52.5	53.8
Wallis and Futuna	84.2	83.7	86.9	54.3	54.4	53.5
Tokelau	81.3	68.8	75.2	55.2	59.3	57.1
French Polynesia	99.1	93.6	88.6	50.2	51.7	53.0
Niue	88.4	78.6	81.3	53.1	56.0	55.0
Tonga	93.8	77.9	90.1	51.6	56.2	52.6
Tuvalu	76.2	73.1	92.2	56.7	57.8	52.0
Samoa	90.9	92.8	95.6	52.4	51.9	51.2

Source: UNFPA (2009)

It is also noteworthy that four of the six countries that are ageing most rapidly have populations below 21,000, and two of them (Niue and Tokelau) have populations below 2,000. These are truly the micro-populations of the region, all of which have been subject to heavy outward net migration flows.

The countries that have the lowest ageing indicators, and are therefore the least subject to population ageing, include Federated States of Micronesia (FSM), Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, and Vanuatu. The first three of these are among the last countries in Micronesia to enter the demographic transition, although FSM also has some emigration to other countries in Micronesia. The last three countries

have already entered the demographic transition but change has been slow. All three have TFRs well above four, and life expectancy is among the lowest in the region. International migration from these countries is also very limited. These demographic conditions are not conducive to rapid population ageing. It follows that these countries, along with FSM, Marshall Islands and Nauru have more lead-time to prepare for an ageing population than the countries in which ageing is already taking place or is well advanced.

The demographic impact of ageing in Fiji, Marshall Islands and Samoa

Current status and projected trends

The countries selected for this study were chosen because they represent variations in institutional arrangements for addressing the issues that arise in ageing populations, not because they currently have the most rapidly ageing populations. Nevertheless, they are aging and it is important to provide a brief overview of likely future patterns of ageing in these countries in order to provide a context for the next section. The following analysis describes the expected demographic impact of ageing, particularly the changing age structure and the relative size of productive and dependent age groups.

The indicators in Table 10 show that Fiji and Samoa have similar ageing patterns, although Fiji's most rapid ageing period may already have passed and Samoa's is yet to come. According to the projections, Samoa's 60 and over population will still be growing at 3.8% per year in 2025, while Fiji's rate of growth will have dropped to 3%. By 2050 Samoa will have a higher proportion of its population aged 60 and over than Fiji and its median age will be higher. But these variations depend entirely on whether the life expectancy assumptions in the projections turn out to be correct. In Fiji's case, male life expectancy has been improving very slowly and this slow rate has been built into the projection assumptions. Improvements in adult mortality in Fiji could change this scenario significantly. Both countries can be expected to have a growing proportion of the 60 and over population in the 80 and over age group.

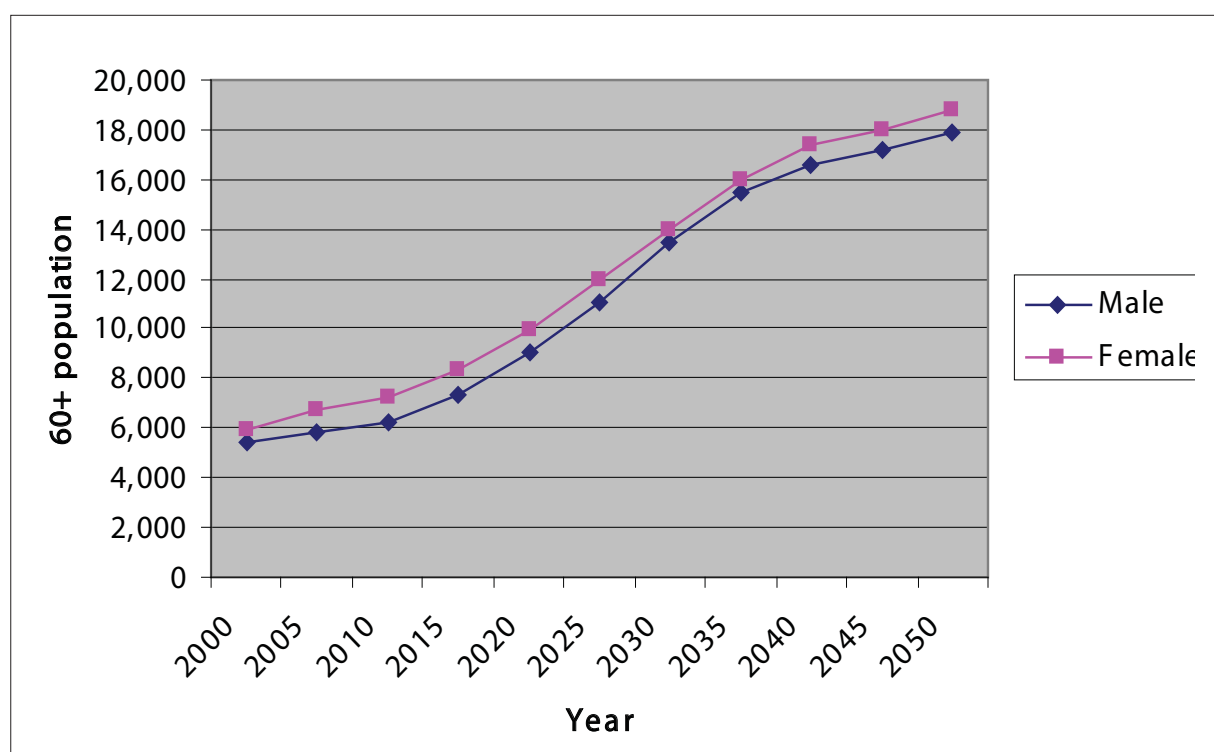
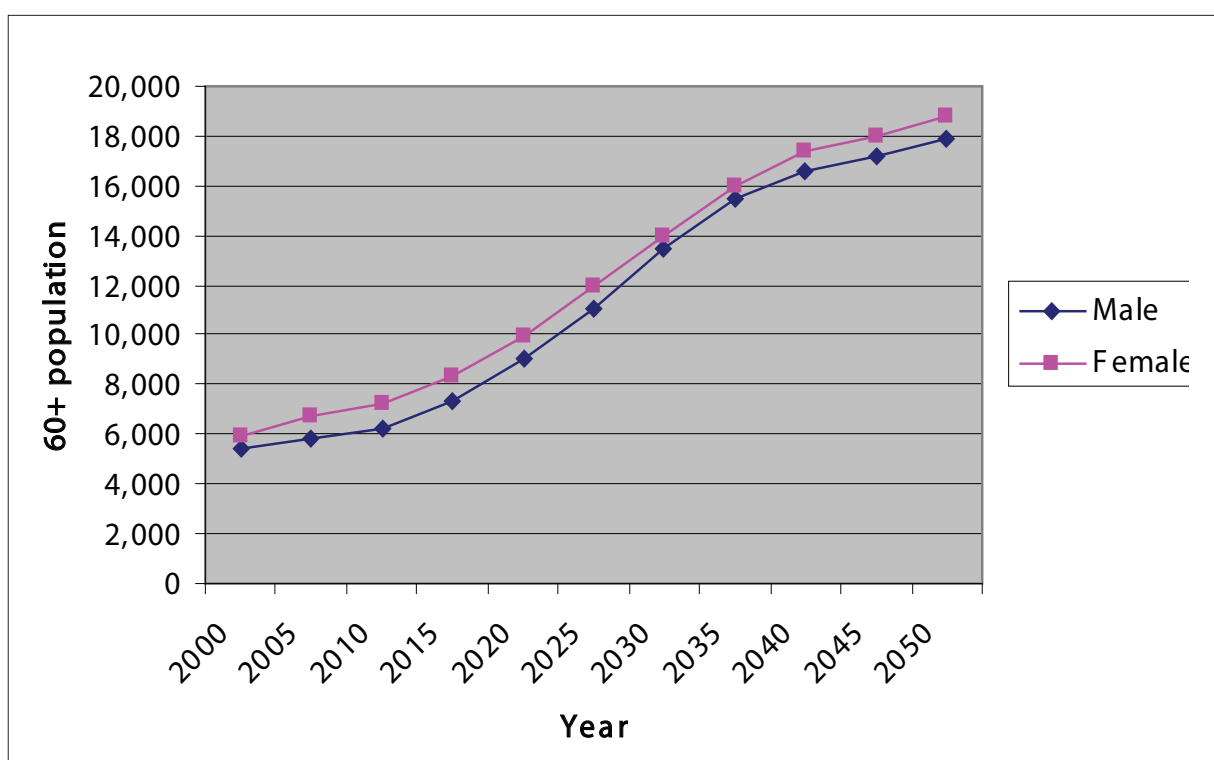
The projected increases in the 60 and over population in Fiji and Samoa are plotted in Figures 5 and 6, respectively. The variations in the slope of these curves have to do with the different patterns of fertility and mortality change in the two countries.

Table 10 Basic indicators of ageing in Fiji, Marshall Is and Samoa

Country	Basic ageing indicators		
	2000	2025	2050
Rate of growth of the 60 and over population			
Fiji	3.6	3.0	1.3
Marshall Islands	1.2	2.8	5.6
Samoa	2.0	3.8	0.6
Proportion of the population aged 60 and over			
Fiji	6.0	12.6	16.6
Marshall Islands	3.4	6.4	11.6
Samoa	6.5	12.1	20.3
Percentage of the 60 and over population that is 80 and over*			
Fiji	3.7	9.2	16.8
Marshall Islands	4.5	7.6	9.5
Samoa	4.4	8.7	15.7
Median age			
Fiji	24	27	33
Marshall Islands	18	22	32
Samoa	19	28	39

Source: UNFPA (2009)

*Data shown for 2000 are actually for 2001 as the terminal age group in the 2000 census distribution was 75+.

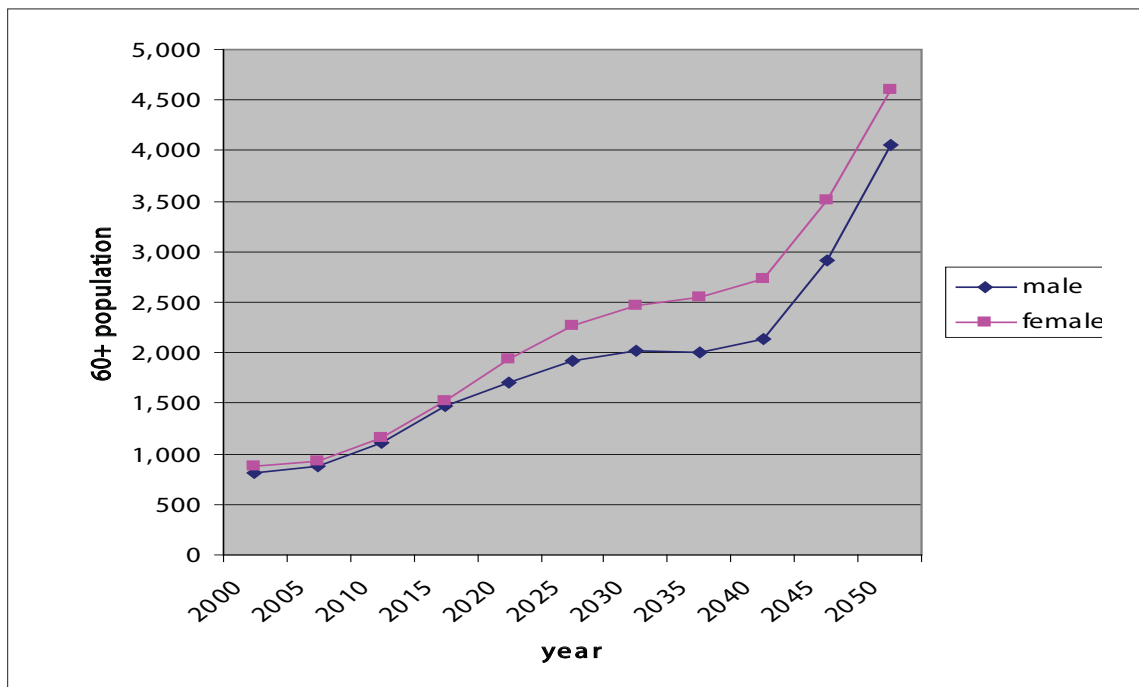
Figure 5 Projected population aged 60 and over in Fiji 2000-2050, by sex**Figure 6** Projected population aged 60 and over in Samoa 2000-2050, by sex

The Marshall Islands presents a rather different picture, although the rate of growth in the 60 and over population is projected to climb to 2.8% by 2025 and to 5.6% by 2050. The proportion of the population aged 60 and over will approximately double between 2025 and 2050 and the median age will reach 32 by that year. If the projection assumptions are valid, the Marshall Islands will have a much longer lead-time to prepare for an ageing future than Fiji and Samoa.

Feminisation of the elderly

It is evident from Figures 5, 6 and 7 that in all three countries there are more older women than older men. The gap is widest in Fiji because the projected difference between male and female life expectancy is larger than in the other countries. As Table 11 shows, the projected sex ratio by 2050 will be lowest in Fiji and highest in Samoa, but the difference is not large. Over 50 % of the older population is currently female and this female dominance will likely continue into the future. Feminisation of the elderly population has very important implications for social security arrangements.

Figure 7 Projected population aged 60 and over in RMI 2000-2050, by sex



Dependency

Equally important as feminisation is the issue of dependency, as mentioned in the introduction to this paper. Table 12 presents three key indicators that reflect the impact of ageing on the age structure: the ageing index, the potential support ratio and the parent support ratio. The ageing index, which measures the relative size of the under 15 and the 60 and over population can be expected to rise substantially, thus signaling a shift from youth dependency to aged dependency. This change has profound implications for social and economic life in the Pacific, as it has in all countries that have experienced ageing.

Table 11 Indicators of feminisation of the elderly population

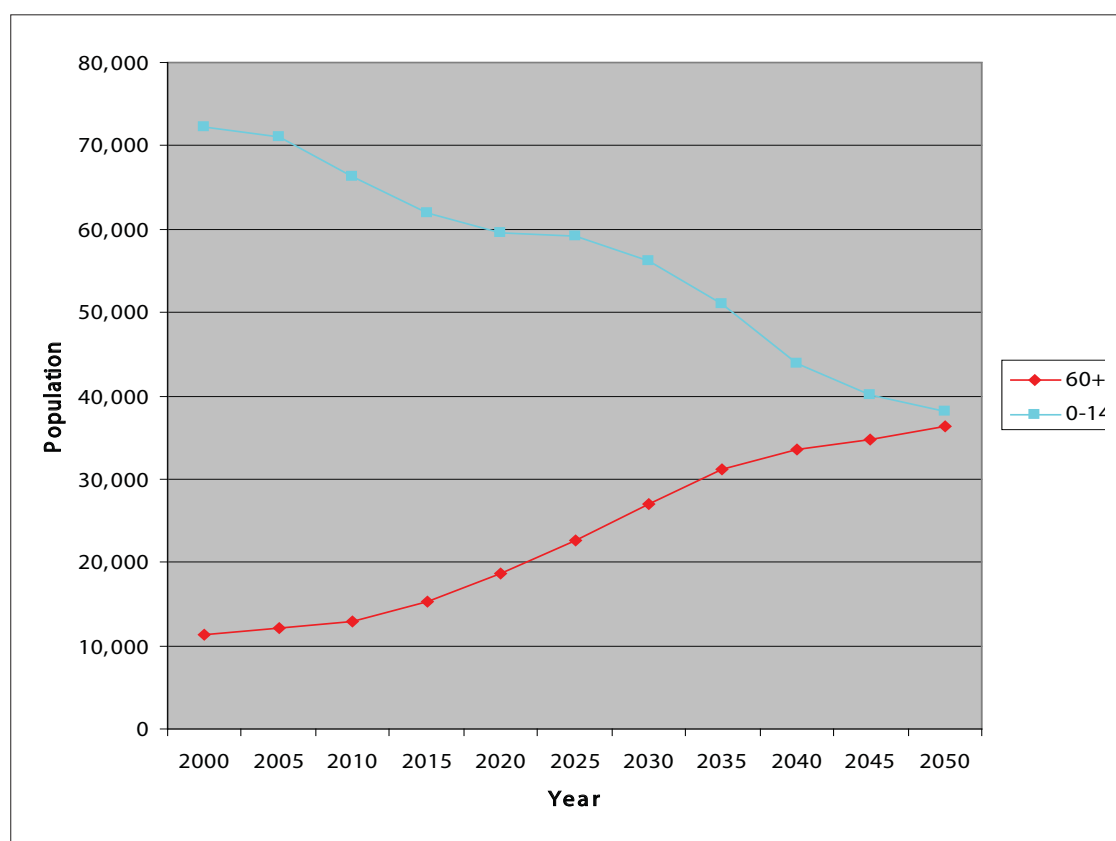
Country	Indicators of Feminisation		
	2000	2025	2050
Sex ratio of the 60 and over population			
Fiji	90.9	81.6	87.3
Marshall Islands	93.8	84.7	88.0
Samoa	90.9	92.8	95.6
Proportion of the 60 and over population that is female			
Fiji	52.4	55.1	53.4
Marshall Islands	51.6	54.2	53.2
Samoa	52.4	51.9	51.2

In none of these countries will the ageing index reach 100 (indicating that the under 15 and 60 and over age groups are of equal size) by 2050, but in Samoa the index is projected to reach 95 (Table 12). In Marshall Islands there could be about half as many people aged 60 and over as children under 15 by 2050, which is a large increase compared to the situation in 2000. The relative shift in these two age groups in Samoa is plotted in Figure 8.

Table 12 Demographic impact of ageing: dependency

Country	Dependency indicators		
	2000	2025	2050
Ageing index (60 and over per 100 persons 0–14)			
Fiji	18.3	45.0	74.0
Marshall Islands	7.8	18.3	51.1
Samoa	15.7	38.7	95.2
Potential support ratio			
Fiji	17.1	8.8	7.4
Marshall Islands	26.8	16.1	12.5
Samoa	12.4	9.4	5.8
Parent support ratio			
Fiji	--	8.0	16.3
Marshall Islands	1.8	5.2	6.5
Samoa	--	9.0	18.1

Figure 8 Changing proportions of 0–14 and 60 and over in Samoa



The potential support ratio is the number of persons aged 15 to 64, the presumably working age population, per every person aged 65 or over (the dependent population). As shown in Table 12, this ratio declines with ageing. In the case of Fiji, there were 17 persons aged 15 to 64 for every person aged 65 and over in 2000 but by 2050 this number is projected to drop by about 60% to a little over 7 persons. In Samoa this is projected to drop to just under 6 persons.

In this report, the parent support ratio is defined as the number of persons aged 80 years or over per 100 persons aged 45-59. This measure is an indicator of how many persons of late labour force age (in fact past labour force age in some Pacific countries) will have a parent in the oldest old age group. In Samoa, this proportion is projected to increase to 18%.

Summary

Ageing is projected to have a similar impact in Samoa and Fiji with both countries having major shifts in the dependent and working age populations over the next two decades. The impact is likely to be marginally greater in Samoa but much depends on future survivorship in adult ages. Should adult male survivorship increase in Fiji then its ageing pattern will more closely match Samoa's. In both countries, emigration is the major unknown factor which could change the dimensions and scale of age structure shifts. It is unlikely, however, that emigration will shift to reverse in either country. If more overseas Samoans decided to retire in their home islands, for example, the impact of ageing would be that much greater. As explained in Section 5, Samoan citizenship carries entitlements to a universal old age benefit and free health care. This entitlement is not presently means tested so even a recipient of an overseas pension is eligible and this would increase the pressure on the government budget.

In Fiji emigration is more likely to accelerate in the coming years than to decline, given political instability and slow employment growth. Retirement migration is unlikely to reach a significant scale, especially among Indo-Fijians but, if it did, the impact would be to exaggerate ageing rather than reduce it.

Ageing in the Marshall Islands will occur much later than in Fiji and Samoa but similar age structure changes can be expected. Here too emigration is the major uncertainty, but the future of fertility is also somewhat unpredictable. It is reasonable to assume a declining trend but the speed of decline is difficult to predict.

Public policy formulation on ageing and the elderly

The Madrid International Plan of Action on Ageing (2002)

The Madrid International Plan of Action on Ageing (MIPAA) builds on earlier conferences on ageing and provides the broad framework of recommendations within which national governments, NGOs, civil society and other actors can address the challenge of ageing populations. National governments have the primary responsibility of translating these global recommendations into national plans and strategies.

Formulating strategies to address population ageing is a new challenge for Pacific Island governments. Only two Pacific countries (Vanuatu and FSM) attended the Second World Assembly on Ageing that adopted the International Plan of Action, and these countries are not among those that are ageing most rapidly at present. There is clearly a need for individual countries to assess their ageing situation and to commence the process of developing strategies and action plans with the assistance and support of international agencies. Of the 11 Pacific countries that reported their population policies to the United Nations in 2007, seven did not respond to the question on ageing while the remaining five described ageing as a "minor concern", including one that is among the fastest ageing countries in the Pacific.³

A United Nations General Assembly resolution in 1995 called on the UN Regional Commissions to take the lead in formulating action plans on ageing. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) organised a regional meeting in Macao (1998) and adopted the Macao Declaration and Plan of Action on Ageing (MPA). UNESCAP subsequently organised a regional seminar in Shanghai (2002) which formulated a strategy for the implementation of both the MPA and MIPAA. The Shanghai Implementation

3 United Nations Department of Economic and Social Affairs (2008).

Strategy⁴ (SIS) reiterates the main policy goals and strategies elaborated in the MIPAA and the MPA, and recommends actions that governments should undertake to achieve these goals, some of which are given below.

- Establish a comprehensive and systematic framework for gathering data and information and undertaking research to identify the circumstances and needs of older persons as well as policy options.
- Encourage the use of the Research Agenda on Ageing for the Twenty-first Century endorsed by the Valencia Forum 2002.
- Enhance the participation of NGOs, older persons' associations and other sectors of civil society in the implementation of the regional and international plans of action on ageing.
- Establish indicators to measure the impact of strategies to assist governments and other national actors in the implementation process.
- Develop, in those countries that do not yet have a national policy or plan of action on ageing, measures that would allow a systematic review of the implementation of their commitments on ageing.

While the involvement of Pacific Island countries in formulating the MPA and the SIS appears to have been minimal, half of all countries reported to ESCAP that they have established national coordinating bodies on ageing, as recommended by the Macao Declaration (UNESCAP 2002b). These countries include Cook Islands, Fiji, Kiribati, Marshall Islands, Palau, Papua New Guinea, Samoa, Tonga, Vanuatu and Guam. Most of these bodies are governmental in nature, located within departments of social welfare.

The recommendation that countries establish national coordinating bodies arises from the recognition that national programs and policies to address population aging require collaboration and cooperation among governments, civil society organisations (CSOs), churches and other social groups, including the private sector.

Examples of national coordinating bodies in the Asia-Pacific region include Malaysia's National Advisory and Consultative Council of the Elderly, Australia's Office for Older Australians, Japan's Policy Office on the Ageing of Society and Sri Lanka's National Committee on Ageing.⁵

National coordination in Samoa, Marshall Islands and Fiji

Samoa

Investigations in Apia confirmed that no coordinating body on ageing is presently operating in Samoa. There is clear evidence, however, that a coordinating body of some kind has existed in the past. It was managed by the Ministry of Health and appears to have been associated with nursing, or perhaps managed by nurses. Officials of the Ministry of Women and Social Welfare who had participated in the group (whose official name could not be established) believed that the activities of the body ceased because external support and technical assistance faded away. The UNESCAP website noted that a "consultant on ageing" was a member of the group (UNESCAP 2002b) which suggests that outside technical support may have been provided in the past. No information could be obtained on the scale of the group's work and its contribution to policy or programming.

Most government and NGO officials consulted in Samoa supported the re-constitution of a national coordinating body on ageing. It was stressed, however, particularly by the Ministry of Health, that government resources were extremely limited to support such an institution and that technical and possibly financial support from outside agencies would be necessary for such a group to be re-established.⁶

Marshall Islands

Although the Marshall Islands was reported by ESCAP to have a coordinating body on ageing (UNESCAP 2002b), no such arrangement is presently in existence. Prior to becoming independent, the Marshall Islands, as part of the Trust Territory of Micronesia, participated in several US Federal Government social programs,

⁴ http://www.un.org/esa/socdev/ageing/shanghai_regional.html

⁵ ESCAP (2002)

⁶ It should be noted that these discussions took place a few days before Samoa was struck by a tsunami. It may be some time before the Ministry of Health will be in a position to address long-term issues such as ageing, but the tsunami might provide an opportunity to assess the vulnerability of older people in natural disasters through applied research.

including some for older persons. A survey of programs for older persons that was cited on the ESCAP website was apparently conducted by the Ministry of Social Services of the Trust Territory just prior to independence. No copies of the survey results could be located in the Marshall Islands capital, Majuro. In any case, the circumstances of today are very different and there is probably little information of current relevance from the pre-independence period.

The two institutions with a major interest and involvement in policy coordination on ageing in the Marshall Islands at present are the Ministry of Health and Environment and the Marshall Islands Social Security Administration (MISSA). The current national health plan 2001-2015⁷ does not include a focus on ageing as such but uses the projected population in various age groups (including 65-74 and 75 and over) to estimate the future demand for health services and their possible cost. The MISSA is implicated in this because wage and salary earners as well as employers pay 3.5% of earnings into a health fund, the proceeds from which are transferred directly to the Ministry of Health.

As in Samoa, officials in Marshall Islands agreed that some form of coordinating body to consider ageing issues would be desirable, given current public health problems. As in the other countries included in this study, non-communicable disease is a growing health problem in Marshall Islands, particularly diabetes and hypertension. If successful, public health efforts to reduce NCDs would have implications for ageing because adult survivorship would presumably increase and health sector costs would also rise due to the general impact of ageing. Efforts to promote healthy ageing should involve government agencies, CSOs and communities. A coordinating body could help develop cost-effective programs while also promoting research on the quality of life among the elderly. The establishment of a coordinating body would fulfill one of the recommended actions of the MPA on ageing that was agreed to in 1998 and reiterated in the MIPAA in 2002.

Fiji

A National Advisory Committee on Ageing and the Elderly (NACAE) was established in Fiji in 1988 under the auspices of the Fiji Council for Social Services (FCOSS). The ILO (2006a: 46) described the function of this body in the following terms:

Promotes coordination, joint planning and consultations amongst the voluntary organisations dealing with issues related to ageing for providing services to the elderly.

The NACAE was transferred to the Department of Social Welfare some years ago but was inactive and it has once again been taken under the management of FCOSS. It would appear that the Committee has not been well-resourced and has not been very active. The Committee appears to have focussed more on the coordination of NGO activities and programs and is perhaps not recognised by the government as an official policy-making body.

Conclusions

In all three countries studied, institutional arrangements for coordinating policy-making and programming to address the social and economic implications of an ageing population are weak. In Samoa and Marshall Islands arrangements are, in fact, non-existent. In Fiji, a skeleton arrangement exists in the form of the NACAE under the wing of FCOSS, but it appears not to be playing a major role in policy formulation, program coordination or in directing ageing research.

Social security in the context of population ageing

Social security systems in the Pacific

There is a large body of research on social security in the Pacific that is impossible to summarise here. A series of studies carried out by the ILO in five Pacific Island countries contain a very comprehensive situational analysis of the overall social security situation and the prospects for improvement. These studies covered the full range of social security issues, including health-care, unemployment insurance, accident compensation, disability and maternity leave, as well as retirement. The overall conclusion of these surveys is that there is a serious unmet

⁷ Ministry of Health and Environment (2000).

need for social security in the Pacific, especially in the (so-called) informal economy. In this regard, the Pacific is not unique. The ILO (2006a: 11) estimates that "... only one in five people in the world have adequate social security while half of the world's population is without any social security protection".

According to assessments by the ILO and other organisations, the overall problem with social security in general in the Pacific is that coverage is too low and the benefits are too small. That is, only a small proportion of the labour force and hence the population is covered, and even those who are covered receive insufficient benefits. This is a general conclusion that refers to all forms of social security or social protection and not just retirement or old age protection (Naidu & Mohanty 2009).

Aside from the social protection provided by extended family and kinship systems, the predominant source of social security in the Pacific is some form of provident fund scheme. A recent review of these arrangements has concluded that provident funds are problematic because they cover only workers in formal employment who comprise a "small fraction" of the working population and exclude "a vast majority of poor and self-employed workers in the informal sector" (Naidu & Mohanty 2009). In Fiji, at least the so-called formal sector does not appear to be such a small fraction of the labour force. The ILO and National Planning Office estimated that 36% of the labour force was employed in the formal sector in 2000 (ILO, 2006a: 55), a proportion that may be little different today. This is certainly well short of a majority but not exactly a small fraction.

Measuring the number of present and former workers who are or will eventually become eligible for a retirement benefit of some kind is actually quite difficult because the labour force in the Pacific is fluid, with people moving back and forth across various categories of labour. Even an 'unemployed' person may be about to qualify for a benefit from a provident fund or could withdraw some benefit on hardship or other grounds. Similarly, a person who has reached the stipulated retirement age may have already withdrawn significant amounts for housing or education or loans and have little left to live on when employment ceases. So it probably is the case that the number of retirees who leave the labour force with sufficient resources to live on independently is a small proportion of the total but this is for a variety of reasons, not just because benefits are restricted to the formal labour market.

Expanding the coverage and improving the scale of retirement or old age benefits in the Pacific is a major, long-term challenge for Pacific Island countries. A variety of options have been proposed, some of which are explored below. The main difficulty with most of these options is that they depend on greater input from governments and therefore have serious implications for government expenditure and taxation.

Old age social security in Samoa, Fiji and Marshall Islands

Samoa

So far as the cash income requirements of the elderly are concerned, the primary sources in Samoa (excluding savings, rents and investment income) are the immediate care-giving and co-resident family, remittances from family members abroad, overseas pensions, and the two pension schemes operating in Samoa. These are: (1) the Samoa National Provident Fund (SNPF), which is a savings and loan scheme primarily for persons in wage and salaried employment; (2) the Senior Citizens Benefit Scheme (Fund), which is a universal, fully government-funded, pension plan that pays a monthly stipend of \$125 to all Samoan citizens and permanent residents living in Samoa who have reached 65 years of age. It also pays for the medical expenses of the older population at public hospitals, as well as travel on government vessels between Upolu and Savai'i.

The SNPF was established by legislation in 1972. It provides a broad range of services, including home loans, death and survivor benefits, disability insurance and medical insurance. Employers and employees each contribute 5% of gross earnings to the fund. Employees may make unlimited additional voluntary contributions and such contributions are tax-free. Self-employed persons, including village workers, are eligible to join the SNPF and make voluntary contributions, but the number of voluntary members is probably small. As with most provident funds there are various options for the way in which members may withdraw their balances on retirement.

Assuming an average age of entry into the labour force of 20 years, the first cohort of Samoan workers to have participated in the SNPF for their entire working lives from 1972 up to age 55 would be reaching retirement in 2007. From 2007 onwards, all wage and salary employees should theoretically be covered. However, the SNPF Annual Report for 2006 (SNPF 2007) reports that the number of pensioners in the retirement pension scheme as

of June 2006 was 961. This number represents only 5.6% of the population aged 55 and over in that year. Still, it can be assumed that the proportion of the 55 and over population receiving an SNPF pension would grow in the coming years.

Not all beneficiaries of the SNPF receive their benefits in the form of a pension. In 2006, 397 members reaching the age of 55 withdrew their entitlements in lump sums with a combined value of \$6,223,630—an average withdrawal of \$15,677. An even larger sum (\$9,796,600) was withdrawn by 1,085 persons migrating permanently overseas. As in other provident funds in the Pacific, permanent migration abroad is one of the grounds for members being able to withdraw their personal balances in the funds. The average amount withdrawn by permanent migrants in the Samoa case in 2006 was \$9,029. Obviously these withdrawals were made by persons of various ages so should not be considered as withdrawals for the purpose of retirement.

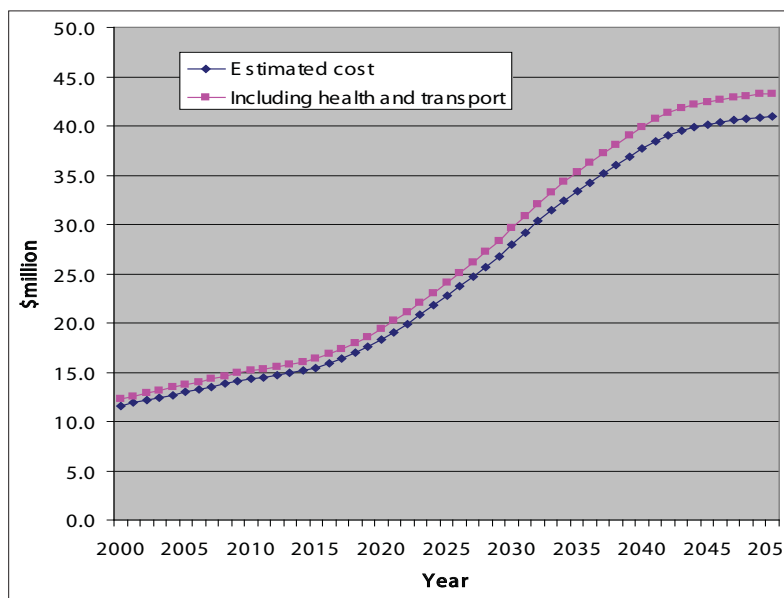
What proportion of the current labour force is presently covered by SNPF? The SNPF Annual Report for 2006 notes that there were 22,526 active members⁸ in that year. This number represents 24.3% of the estimated population of labour force age (15–54) in that year. Defining the labour force more traditionally as covering the age range 15–64 would reduce the proportion of workers covered by SNPF to about 22%.

It can therefore be understood why the Government of Samoa introduced the Senior Citizens Benefit Scheme in 1990. Otherwise, a large proportion of the elderly population would have no pension income and would be dependent on family (or other income sources) for their living expenses. While the monthly benefit is not large, it does allow older people to participate in social and cultural affairs without asking their family for money. Contributing to the church, for example, is an important aspect of Samoan culture and having a cash income, however small, allows older people to do this independently.

The best estimates of the current population aged 65 and over in Samoa, combined with data from the Annual Report of the Senior Citizens Benefit Fund, suggest that virtually all of those who might qualify for the benefit are receiving it. In the year to June 2007, 8,830 persons received a pension payment (Government of Samoa 2007), while the estimated population aged 65 and over at the mid-point of the period was 8,939, about as close to 100% as can be estimated, given the uncertainties in the population data.

What is the likely impact of population ageing on the costs of the Senior Citizens Benefit Scheme? So long as the benefit remains at \$125 per month, the future costs of the scheme to the government (disregarding inflation) can be estimated by simply multiplying the projected number of persons 65 years of age and over by \$125 per month.

Figure 9 Projected costs of the Samoa Senior Citizens Benefit Fund with ageing, 2000-2050



The projections (Figure 9) show that the cost to the government budget would increase from around \$14 million in 2007 to \$41 million in 2050. Adding the costs of health care and inter-island transport increases the costs by another \$2.5 million. The rather small difference that health-care costs make is due to the fact that at the present time the cost of senior citizen health benefits is only \$52 per capita per year, a very small amount. This suggests either that only very basic health care is being provided or that the Department of Health Services is subsidising the costs of pensioner health-care.

The affordability of this type of universal benefit scheme obviously depends on a number of factors, but particularly the

⁸ It is not clear how “active members” are defined. In some provident funds persons collecting benefits but no longer contributing are classified as members of the fund.

relationship between the size of the benefit and government revenue. Since 1990, the benefit has been increasing at the rate of 4.7% per year, which would appear to be related to the rate of inflation. The threat to the scheme would follow from an effort to raise the benefit above the rate of inflation, and above the rate of increase in government revenue and gross domestic product (GDP). If the case of Marshall Islands is any guide, politicians are very likely to press for an increase in benefits during elections and, as the number of elderly voters increases, the pressure on politicians to raise benefits will also increase.

The other threat to the Scheme is increasing health-care costs. At the moment, health-care costs per capita are very low. As the oldest old increase as a proportion of the old, per-capita health-care costs will presumably rise. The costs of health-care may also rise because price inflation in medical equipment and pharmaceuticals may be higher than the general rate of inflation.

Fiji

The Fiji National Provident Fund (FNPF) is the primary source of retirement benefits. Legislation establishing the fund was passed in 1966, prior to independence, but the Act has been amended several times since. Membership is currently compulsory for employees working under an employment contract. Originally, persons working for fewer than 12 days per month were not required to contribute. This enabled employers to evade payments to the Fund. The FNPF also provides for voluntary membership for self-employed and domestic workers, although 99% of current members are compulsory members (ILO, 2006a: 61). Like other provident funds, the Fiji NPF provides a range of benefits, including assistance for housing and school fees, death benefits, disability and health insurance.

As is the case with most provident funds, the FNPF is basically a compulsory savings scheme in which employers and employees pay a fixed proportion of gross earnings. At present, employers and employees pay 8% of gross income each to the employee's account. Various options are available for withdrawal of funds. Partial withdrawals are permitted for housing and other purposes. A lump sum may be paid on attaining the age of 55 years, or the member's balance may be converted to an annuity and received in the form of a monthly pension.

It is difficult to determine what proportion of the current labour force is covered under the FNPF and will eventually have retirement income.⁹ Assuming that the ILO estimate that 36% of the labour force is in formal employment, the maximum number of current contributors would be about 167,000. However, the FNPF Annual Report for 2007 (FNPF 2007) records that there were 343,453 FNPF 'members' in that year. This number would constitute 72% of the population of labour force age, so it exceeds by far the maximum likely number of contributors and future beneficiaries. It would appear that a member can be defined to include anyone with an FNPF account, including retirees and possibly widows in receipt of a death benefit or pension.

According to the Fiji Islands Bureau of Statistic (FIBS) figures, there were 121,967 wage and salary earners in 2004 (FIBS, 2009). This would be equivalent to 26% of the estimated labour force under 55 years of age, a significantly lower proportion than that estimated by ILO or the Reserve Bank. In the absence of more detailed information, it is assumed in this paper that between 26 and 36% of the labour force will be eligible for FNPF benefits on retirement. Inversely, this suggests that between 64 and 74% of the current labour force will not be eligible to receive benefits from FNPF upon retirement, implying that between 300,000 and 350,000 people in Fiji will need to depend on other sources of old age support once they leave the labour force over the coming years.

The other question that arises is whether the pension received by FNPF beneficiaries is adequate to achieve a reasonable level of living in retirement—leaving aside all the variations in style of life and rural and urban locations. This is difficult to assess because the majority of members who reach retirement age withdraw their balances in the form of a lump sum payment. The proportion of beneficiaries converting their FNPF savings into a pension peaked at 28% in 1999 after which it has declined. Several observers (e.g., ILO 2006a: 77) have suggested that lump sum payments are quickly expended because of pressure from relatives to share the money. However, it is likely that some persons have used lump sum benefits to start small businesses, which may not necessarily have been successful. Others may use the money to build a home in an informal settlement or village, either to live in or possibly to rent out to gain an income.

⁹ The necessary information is available in actuarial reports to the FNPF, which are confidential. A request has been made for FNPF to release the basic data to the author.

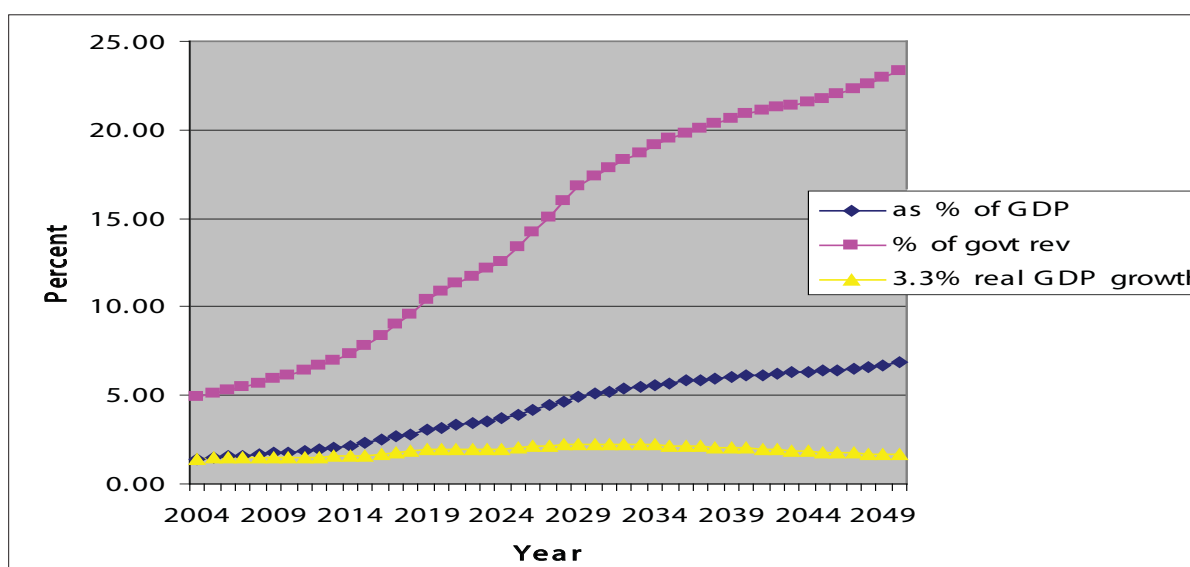
In 2005, the FNPF was paying 8,900 persons pension benefits and the average pension was \$372 per month (ILO Decent work decade p.3). In terms of coverage, this number is about 10% of the population aged 55 and over in this year or 16% of the population aged 60 and over. Thus, after more than 40 years of FNPF's operations, 84-90% of the elderly population were not benefiting from the scheme—at least not in the form of a monthly pension.

As to whether those who were receiving a pension benefit were receiving adequate financial support, one basis for assessment would be the national poverty lines. Using data from the 2002/03 Household Income and Expenditure Survey, Abbott (2006) estimated the 'basic needs poverty line' for all of Fiji (both urban and rural sectors) at \$33.10 per week or \$143 per month. Pensioners earning the average FNPF pension of \$372 per month or above in 2005 would certainly have been living above the poverty line. However, as Naidu and Mohanty (2009) have pointed out, the contributions to FNPF are highly unequal, so it is likely that the average pension may be misleading and the median monthly pension may be much less than \$372. In any case, as already noted, 84-90 % of the elderly do not benefit from the FNPF due to its limited coverage. Unfortunately, HIES data do not specifically report FNPF pension income, so it is not possible to determine the distribution across households from that source.

Various suggestions have been made as to how formal social security coverage might be expanded in Fiji, including the introduction of a universal pension along the lines of the Samoa Senior Citizens Benefit Fund. The key issue for government in all such proposals is affordability, both in terms of government revenue and the trade-offs that would be involved between support for retirees and investment in human capital.

Figure 10 shows the effects of introducing a universal old age benefit at age 65 in Fiji starting at 30 % of the average wage in 2004 and rising to 40 % by 2050. The initial starting pension would be at approximately the adult poverty line whereas by 2050 the pension would be just above the poverty line, assuming that the cost of living adjusted for inflation remains about the same.

Figure 10 Costs of a universal pension in Fiji at age 65 as a percentage of government revenue and two assumptions about total GDP growth



Note: This assumes pension is 30% of average wage rising to 40% by 2050. Wages, GDP and revenue are assumed to increase by 4.7% per year.

Introduction of a universal old age pension would obviously have significant implications for government revenue and GDP. As a percentage of total government revenue, the costs would increase from 4.9% of revenue in 2004 to 24% in 2050 because of the impact of ageing. This estimate does not include the government's own contributions to the FNPF as an employer. At current expenditure levels, the cost of the scheme by 2050 would be more than health and education expenditure combined. As a proportion of GDP, the costs of the pension scheme would rise from 1.4% in 2004 to 6.9% by 2050.

It can be presumed that these figures make such a scheme unaffordable for government, unless total GDP increases at a much higher rate than assumed in this projection. The lower line in Figure 10 shows that GDP would have to grow at a real rate of 3.3% for the costs of the scheme to remain as a more or less constant proportion of GDP (in the range 1.4 and 2.2%). Based on past economic performance, such a rate of GDP growth in Fiji is unlikely.

It also needs to be borne in mind that the cost to government of a universal pension based on these assumptions would already be \$87 million in 2009, or about 75% of government expenditure on health.

An alternative pension option that has been suggested is a voluntary contributory scheme for informal sector workers who, by definition, are not covered by the FNPF. An ILO survey of the informal economy around 2005 found that 72% of respondents were willing to contribute to a social security system from their own earnings (ILO 2006a: 91). The difficulty is that the vast majority of workers in the informal economy could contribute only \$10 per month or less. A survey of formal sector workers found that 80% were willing to contribute to their own social security. Although the amounts that formal sector workers were prepared to contribute were higher than workers in the informal economy were able to contribute, they were still quite low, with the vast majority in the range of \$6 to \$20 per month.

Both informal and formal workers indicated that retirement and old age security was an important concern for them, but health-care and unemployment protection were the predominant concerns among formal sector workers. The low capacity to pay among both groups of workers would make it difficult to construct a meaningful retirement scheme without some form of government subsidy. The addition of a government subsidy or matched contribution then raises many of the revenue issues that a universal pension scheme would raise.

Marshall Islands

The Marshall Islands social security system is similar to the US system in that it provides a 'defined benefit' on retirement. Although workers and employers make a fixed and equal contribution (tax) from wages and salaries, the amount of the retirement benefit depends on age (having reached 60 years), the length of service and final salary rather than the actual balance in the member's account. While the social security administration (RMISSA) commits some proportion of its tax receipts into an investment trust fund, the system is more like a social insurance scheme than a provident fund because beneficiaries can receive more than they and their employers have contributed. Palau and FSM social security systems operate in the same way, having been inherited from the Trust Territory. An example from FSM will demonstrate the problem of unfunded liabilities. As of December 2008, the active members of the fund had contributed \$14.7 million into FSM Social Security Administration (FSMSSA). On the other hand, the FSMSSA had paid out \$80.8 million in benefits. Thus, beneficiaries received 5.5 times what they had previously contributed. At the present time, FSMSSA's accumulated liability (what they would have to pay out if all contributors became eligible), is \$262 million, but the total value of the FSMSSA's investment-based assets is \$42.7 million, or only 16% of its accrued liability. Marshall Islands is in the same situation with an accrued liability of \$207 million in 2006 and \$61.2 million in assets. The funded portion of RMISSA's liability in 2006 was only 29.5%.

The problem of unfunded liability has prompted major changes to the FSM's social security legislation, including an extension of the retirement age to 65, compared with 60 in Marshall Islands.

The constant worry for the administrators of these schemes is that they will have to draw down on their assets, or use investment income to pay benefits, because in any given year the benefits paid out may exceed contributions. In RMI this has not happened yet but it has come close. In 2007, for example, 93% of contributions were paid out as benefits. The difference was \$860,000—a rather slim margin and roughly similar to the amount of employer arrears.

The problem of unfunded liabilities is not so much or only that members will retire but that they will die or become disabled, at which point benefits will have to be paid. The eligibility for a retirement benefit is predictable because it is based on age and length of service, etc. Death and disability are not predictable. (Re-insurance to protect the RMISSA from unexpected claims would be prohibitively expensive). Employer and employee contributions are also unpredictable because these depend on employment growth as well as compliance. Getting 100% of employers to actually pay their social security taxes is difficult and in RMI the rate of compliance has been as low as 60%. Great effort and in some cases legal action is required to get employers to pay the required taxes to the RMISSA.

The other constant worry for the RMISSA is that the legislature will make changes to social security law to increase benefits without also requiring an increase in contributions. Several bills to that effect have been presented to the Nitijela but, fortunately for the RMISSA, have not been passed. The FSM legislature has gone the other way and introduced a new bill to decrease benefits and bring the assets and liabilities of the scheme into better balance.

The problem of unfunded liability has prompted the Marshall Islands to consider converting the scheme to a provident fund, which by definition is fully funded. Technical advice on how to achieve this has been sought from the ILO and the FNPF. To achieve this, either social security taxes would have to increase or a major capital injection would be required, or both. Alternatively, benefits would have to be reduced to the total of members' contributions. Some combination of all these measures may be required and phased-in over time. An increase in employer contributions would have an impact on government spending because at least 41 % of formal employment in the Marshall Islands is in government agencies (RMI & UNDP, 2009: 5).

What proportion of the labour force is covered by the social security system of Marshall Islands? In the absence of recent labour force statistics it is difficult to answer this question. In 2008, however, the total number of employees making contributions to the RMISSA was 7,762 (RMISSA, 2008). This is 26% of the estimated 2008 population of labour force age (15–59), confirming that the majority of workers are not covered by social security. Interestingly, 26% of households in Majuro reported receiving social security or pension income in the 2006 Community Survey (RMI & UNDP 2009).

In terms of current beneficiaries, the RMISSA reported that 3,300 beneficiaries received a total monthly benefit of \$962,000, which translates to \$292 per month per beneficiary. This figure includes all classes of beneficiary, including widows and children of deceased members, and disability payments. Based on estimated monthly gross earnings in 2008 of \$772 (RMI & UNDP 2009:11), a monthly income of \$292 is equivalent to 38% of the average wage. It cannot be assumed, however, that this is the amount that retirees receive on average because other classes of beneficiaries are included in the calculations. However, articles on retirement planning in the Marshall Islands Social Security Journal used the figure of \$300 per month in their case studies, so the figure of \$292 per beneficiary may not be too far from what most retirees can expect.

More detailed studies are required to assess whether current or future retirees have or will have sufficient income to achieve a reasonable level of living. A retirement income of \$300 per month would be approximately 39% of the average wage in 2008.

The question arises of whether it would be feasible to extend retirement benefits to the entire elderly population by means of a government-funded superannuation scheme. The key issue is affordability. This in turn depends on the level of the benefit. If we take the New Zealand standard of 60% of the average wage, the monthly pension in the Marshall Islands would need to be approximately \$460 per month, given present wage levels. Leaving aside the adjustments required for single elderly people living alone and co-resident couples, it is possible to estimate the annual cost of such a scheme and project these costs into the future. Figure 11 shows that the cost to the government of such a scheme would, due to ageing alone, increase from around \$12 million per year in 2009 to \$48 million per year in 2050, assuming that ageing occurred as projected.

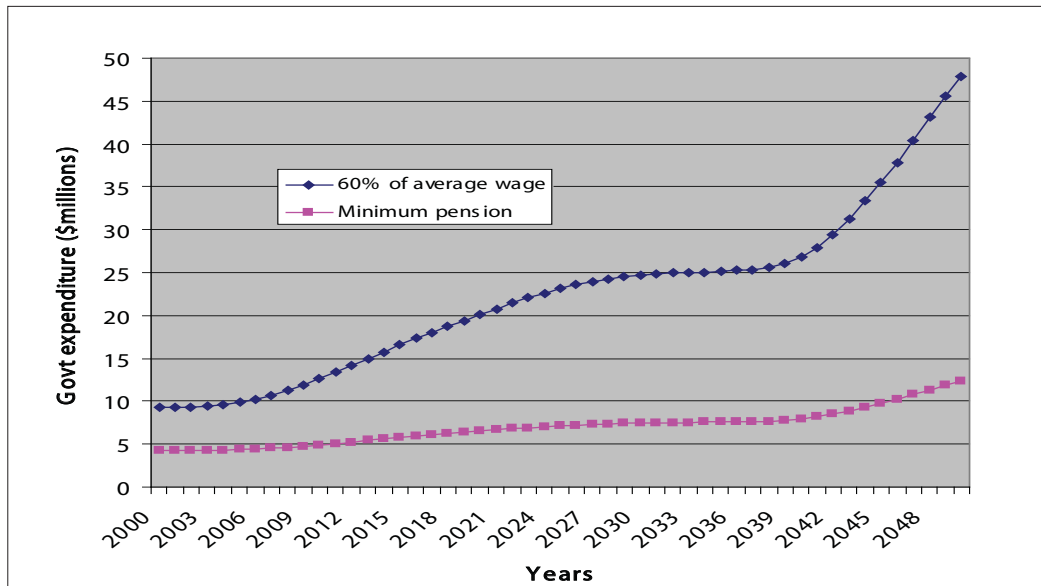
It is probably reasonable to conclude that such a scheme is unaffordable from the viewpoint of government revenues. At present, the government is contributing approximately \$2.2 million in social security tax for its own employees. Replacing this with a universal pension at 60% of the average wage would increase the cost to government by a factor of 5.5 if the government were the sole contributor. The implications for tax rates would be serious.

Another option might be to provide a minimum pension to those who are not covered by social security. At present, the minimum pension for those who are covered by social security is \$129 per month. If it is assumed that only 25% of the labour force is covered by social security, then 75% of those who reach the age of 60 would not be covered. The estimated future cost to government of providing \$129 per month to 75% of the 60 and over is shown in the lower line of Figure 11.

Note that the costs to government include the present social security tax contributions of current government employees, assuming that the number of government employees remains constant at 41% of the formal labour force. In this scenario the combined social security and pension costs to the government would rise from \$4.8

million in 2009 to \$12.3 million in 2050. It is possible that this is a more affordable option for extending coverage than the universal benefit at 60% of the average wage and it would be more equitable than a universal pension that also included persons receiving social security payments.

Figure 11 Estimated cost of a universal pension scheme in RMI at 60% of the average wage and a minimum pension of \$129/month*



*Cost of minimum pension of \$129 per month includes the cost of SSA tax for existing government employees.

Source: Author's projections

Summary

Estimates of the present coverage of existing pension and social security schemes in the three countries studied confirm the conclusions of other studies of formal social security schemes—that the majority of the working population is not covered. The only example of full coverage in the three countries is the Samoa Senior Citizens Benefit Scheme, which provides a modest cash stipend, health care and some transportation benefits.

Expanding the coverage of old age social security, or even maintaining the level of benefits where coverage is universal, in the context of an ageing population presents a major challenge to governments. The simulation exercises presented above show that expanding coverage to larger proportions of the population would have a major impact on government revenue and hence taxation. A number of issues are raised by this. First and foremost is the issue of intergenerational equity. Increased taxation on the current labour force to pay for increased direct benefits to the older population is a form of inter-generational transfer. As Mason and Lee (2004) pointed out, such transfers have a negative impact on economic growth in that they do not contribute to capital deepening. The accumulation of 'transfer wealth' by the elderly means that the second demographic bonus will not be achieved.

To achieve the second demographic bonus, it is essential to create wealth in the form of capital rather than 'transfer wealth'. Achieving this is clearly difficult. In the Fiji case it was shown that workers in both the formal and informal economy have little capacity to contribute to capital wealth creation, especially in the informal sector where the need for coverage is greatest. Government's capacity to contribute to a capital wealth fund, beyond what it already contributes to provident funds on behalf of its own employees, is constrained by alternative demands on revenue, exacerbated by slow rates of growth in GDP.

Conclusions and recommendations

Conclusions

Population ageing is occurring in the Pacific Islands and will accelerate in the coming decades. The pace of ageing varies widely between sub-regions and individual countries. Ageing is occurring most rapidly and is

most advanced in the small countries of Polynesia and Micronesia. The pace of ageing is much slower in Melanesia, with the exception of Fiji and New Caledonia.

By 2050, the number of persons aged 60 and over in the Pacific is projected to increase from 376,000 in 2000 to 2.25 million by 2050. The oldest old (80 years and over) is presently the fastest growing age group and this group will increase from around 19,000 in 2000 to 270,000 by 2050—a fourteen-fold increase.

The majority of elderly people in the Pacific will be women but the feminisation of aging is unlikely to reach the levels of the more developed countries. Among the oldest old, however, over 60% are likely to be women by 2050.

A review of the institutional arrangements for addressing population ageing in Samoa, the Marshall Islands and Fiji at national level suggests that these arrangements are presently weak. National coordinating bodies are not functioning. Samoa and the Marshall Islands have not had functioning arrangements for some years. Fiji has a structure but it is also not functioning effectively as a policy-making body. It is likely that this situation is replicated in other countries.

Social security systems for the elderly in these three countries have limited coverage and possibly inadequate benefits. The role of family systems in providing support in kind has not been studied in detail but may well compensate for the lack of a cash income.

Based on these case studies, the extension of social security in old age to those who are not presently covered would present major challenges to Pacific Island economies. A universal benefit would impact heavily on government expenditure and would build 'transfer wealth' rather than assist with capital. More rapid economic growth would be required to finance even a modest universal benefit for all persons reaching old age.

Based on the three case studies, Pacific Island countries do not appear to be in a position to capture the full benefits of the second demographic bonus.

Recommendations

Efforts should be made to re-establish or re-invigorate national coordinating bodies on ageing in Fiji, Samoa and Marshall Islands. International agencies, particularly UNESCAP, but including UNFPA and the World Bank, along with such bilateral agencies as AusAID and NZAID, should consider the possibility of providing the financial and technical support that countries may require to do this. Other countries in the region should be encouraged to review their institutional arrangements.

National and international efforts are needed in the Pacific region, its sub-regions and in individual Pacific countries in order to expand the knowledge base on population ageing and its implications. The Research Agenda on Ageing in the Twenty-first Century endorsed in Valencia in 2002 can be used to identify the key issues on which research is required. Much more analysis of population ageing is needed, particularly the differentials between urban and rural areas.

More information is also needed on the economic situation of the elderly population in both urban and rural areas. Future household income and expenditure surveys should include pension income as a specific source of income in order to assess the contribution of pensions to the level of living of elderly people, particularly the proportion living below the poverty line. The role of overseas pensions and remittances in supporting the elderly also needs further study.

Much more analytical work is needed to support the formulation of strategies to capture the second demographic bonus by building wealth funds in anticipation of an ageing population. Both Samoa and Fiji have significant amounts of wealth in their national provident funds, but these funds could be greatly enlarged if all workers were able to contribute. Further research is needed on how to expand membership or how to encourage other forms of savings through contributory schemes.

The role of family and kinship networks in providing income in-kind and other forms of support to the elderly needs intensive study. The possibility of further analysis of HIES data sets needs to be explored in this regard.

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Annex I

Definitions of key ageing indicators

Ageing index

The ageing index is the number of persons aged 60 and over per 100 persons aged 0–14.

Dependency ratio

The total dependency ratio is the number of persons aged under 15 plus persons aged 65 and over per 100 persons aged 15 to 64. It is the sum of the youth dependency ratio and the old age dependency ratio.

The youth dependency ratio is the population 0–14 years per 100 persons 15 to 64 years.

The old-age dependency ratio is the number of persons aged 65 years and over per 100 persons aged 15 to 64 years.

Life expectancy

Life expectancy at a specific age is the average number of additional years a person of that age could expect to live if current mortality levels observed for ages above that age were to continue for the rest of that person's life. In particular, life expectancy at birth is the average number of years a newborn would live if current age-specific mortality rates were to continue.

Median age

The median age is the age that divides a population into two groups of the same size, such that half the population is younger than this age, and the other half is older.

Parent support ratio

The parent support ratio is the number of persons aged 85 years or over per 100 persons aged 50 to 64. (In this paper the parent support ratio is calculated as the number of persons 80 years or over per 100 persons aged 45 to 59.)

Potential support ratio

The potential support ratio is the number of persons aged 15 to 64 per every person aged 65 or over.

Sex ratio

The sex ratio is the number of males per one hundred females in a population. The sex ratio may be calculated for a total population or for a specific age group.

Survival rate

The survival rate to a specific age x is the proportion of newborns in a given year who would be expected to survive at age x if current mortality trends were to continue for at least the next x years. Survival rates are derived from the life table, which is an analytical procedure designed to produce life expectancy and other measures of survivorship, based on prevailing age-specific death rates.

Total fertility rate

The total fertility rate is the average number of children a woman would bear over the course of her lifetime if current age-specific fertility rates remained constant throughout her childbearing years (normally between the ages of 15 and 49). The current total fertility rate is an indicator of the level of fertility at a given time.

Annex II

Population projections: A note on methodology

The population projections used in this paper were obtained from two sources. Data on ageing in world regions—including Melanesia, Micronesia and Polynesia—were taken from the 2004 revision of the official UN population projections prepared by the Population Division of the United Nations Department of Economic and Social Affairs (UNDESA). The actual source publication is the report *World Population Ageing 2007* (UNDESA 2007). A separate set of projections was carried out by the author with the support of the UNFPA Sub-regional Office, Suva, Fiji for countries not covered by the UNDESA. The UNDESA projections do not provide detailed demographic data for the countries or territories of the Pacific with populations under 100,000. The total populations of these countries were included in the sub-regional totals for Melanesia, Micronesia and Polynesia, but it is not possible to obtain country-specific figures. Furthermore, the UNDESA projections do not provide totals for the sum of the sub-regions because these are subsumed within the larger area known as Oceania, which includes the sub-regions plus Australia and New Zealand.

To obtain country-specific data, and Pacific-wide totals, the methodology employed was to extend the population projections carried out by the Secretariat of the Pacific Community (SPC), Statistics and Demography Program, from 2030 to 2050. The base populations, fertility, mortality and migration inputs and assumptions used in the SPC's 2005–2030 projections were kindly supplied to the author.¹⁰ The projections were subsequently re-run from 2000 to 2050 so as to match in time the UNDESA projections for the larger countries and the sub-regions. The computer program employed was DEMPROJ, a sub-set of the Spectrum package supplied by The Futures Group.

Some adjustments were required to run the projections, as follows:

1. In those countries for which a year 2000 base population was not available from SPC, the 2000 population by age and sex was estimated by interpolation.
2. Where more recent input data was available than used by SPC in its 2008 update of projection inputs (such as fertility data from recent demographic and health surveys) these data were used as appropriate.

The broad assumptions employed by the SPC in projecting Pacific populations to 2030 were employed in these projections. In the case of fertility, the SPC had estimated a year in which it was assumed that the TFR would reach the replacement level of 2.2. In some cases this date was well beyond the end year of 2030, e.g. 2044. In these cases, the present set of projections retained this assumption and set the TFR as constant at replacement level up to 2050. In those cases where the TFR had already fallen below replacement, this level (for example 1.8) was projected to continue through to 2050 without further change.

A similar approach was adopted for the mortality assumptions. Where life expectancy had reached a high level by 2030, only gradual change to 2050 was permitted up to a maximum life expectancy at birth of 80 years. This is the maximum limit accepted by the DEMPROJ program but it is also a realistic maximum for Pacific conditions.

In the case of international migration, the extension of the SPC's assumptions up to 2030 through to 2050 would have been unrealistic in some countries. In the Cook Islands, for example, constant rates of emigration through to 2050 would result in severe depopulation of the country. It was therefore assumed that net migration would trend downwards in those countries that are already heavily affected by migration.

Some further adjustment of the inputs and assumptions was made after consistency checks were made between the SPC's own projection results and the results obtained from the UNFPA projections. There is broad agreement between the projections carried out for the present study and those produced by the SPC where the dates coincide. There is also broad general agreement with the UNDESA's projections for those countries for which the UNDESA Population Division has done projections but the results are not necessarily identical in all respects. For example, the UNDESA's projections for Fiji assumed a faster rise in life expectancy than the projections done for the present study.

It should be noted that for these projections, as is the case for SPC's projections, only one set of assumptions has been employed.

¹⁰ The cooperation of SPC is gratefully acknowledged. The use of the projection input provided by SPC and the subsequent modification of these inputs is the responsibility of the author alone, not SPC.

Population ageing in Fiji: current trends and challenges

Vasemaca Lewai

Population ageing is a process by which older persons become a larger proportion of the total population. Initially experienced by more developed countries, the process is now being experienced by developing countries. Declines in mortality at younger ages, medical advances and better health care services have resulted in higher life expectancy in both the developed and the developing world. Family planning and other related socio-economic developments have succeeded in reducing fertility rates, thereby reducing the size of the younger population.

The magnitude and pace of ageing varies from one region to another, and also within regions. Two ethnic groups living side by side within the same locality have been found to experience different paces of ageing.

Population ageing is an inevitable process, experienced throughout a country's demographic history. It is a process that is similar to the demographic transition, often characterised by very high fertility and mortality at the beginning with a high proportion of children in the population. It is when these children begin to decline in their share of the total population that the population ageing process begins.

This paper proposes to discuss the process of population ageing in Fiji. It focuses briefly on the determinants of ageing, particularly the patterns of fertility and mortality. This is followed by examining different indicators of ageing as experienced over the last three to five decades, focusing on ethnic, regional and gender differentials. The major source of data are the Population Censuses of Fiji.

Population ageing in Fiji

The population of Fiji has grown from 127,486 in 1881, when the first census was held, to 837,271, according to the 2007 census. In that year, ethnic Fijians accounted for 54% of the total population, Indo-Fijians 38% while the remaining 8% was comprised of minority groups.

Growth rates have fluctuated. Decreases in population were recorded in the early 1900s due to epidemic attacks but the population has grown steadily since then. The highest growth rate of 3.3% was recorded in 1966; it then slowly declined over the years. Since the 1987 coup, Fiji has recorded a very low growth rate. The average annual growth rate recorded at the latest census of 2007 was 0.7%.

Population size and structure in Fiji was significantly affected by the 1987 political upheaval, where people of Indo-Fijian descent left the country in huge numbers, resulting in negative growth rate for that year. This, together with the low fertility rate among Indo-Fijians, has continued to decrease the size of the Indo-Fijian population.

Determinants of population ageing

Fertility

Fertility and mortality are the two major determinants of population ageing, affecting the age structure at the two extremes. While fertility affects the young age cohorts as a result of fewer births, mortality affects the older age group as a result of improved life expectancy.

At the onset of the process, both fertility and mortality were high and characterised by very high proportion of young persons aged less than 15 years, accounting for almost half the population, while the old was insignificantly low at around 2%.

In 1966, the total fertility rate (TFR), defined as the average number of children for every child-bearing woman, was a high 5.6 for Fijians and 5.4 for Indo-Fijians (Table 1). Due to this high number of births, the proportion of children was a high 46.7% of the total population. The fertility rate started declining after 1966; by 2007 it had dropped to 3.0 for Fijians and 1.7 for Indo-Fijians.

Table 1 Total fertility rates by ethnicity, 1966 to 2007

Ethnic Group	TFR 1966	TFR 1976	TFR 1986	TFR 1996	TFR 2007
Total	-	-	3.1	2.9	2.5
Fijians	5.6	4.3	3.6	3.5	3.0
Indo-Fijians	5.4	3.5	2.7	2.4	1.7

Source: FIBS

Fertility decline is caused by many socio-economic factors. In addition to the introduction of the family planning programmes in the early 1960s, girls marrying at an older age and their need to pursue higher education have had a significant impact on fertility by reducing the reproductive span of women. Women's engagement in the cash economy is also an important contributor to the declining fertility, as her traditional role of reproduction is affected by her involvement in the cash economy.

Mortality

An improvement in life expectancy at birth means that people are living longer, resulting in a larger proportion of people in the older age groups. Life expectancy for Fiji is below 70 years except for Indo-Fijian females where it is 72.1 years. In spite of fluctuations, life expectancy is expected to improve as people become increasingly aware of the importance of healthy living.

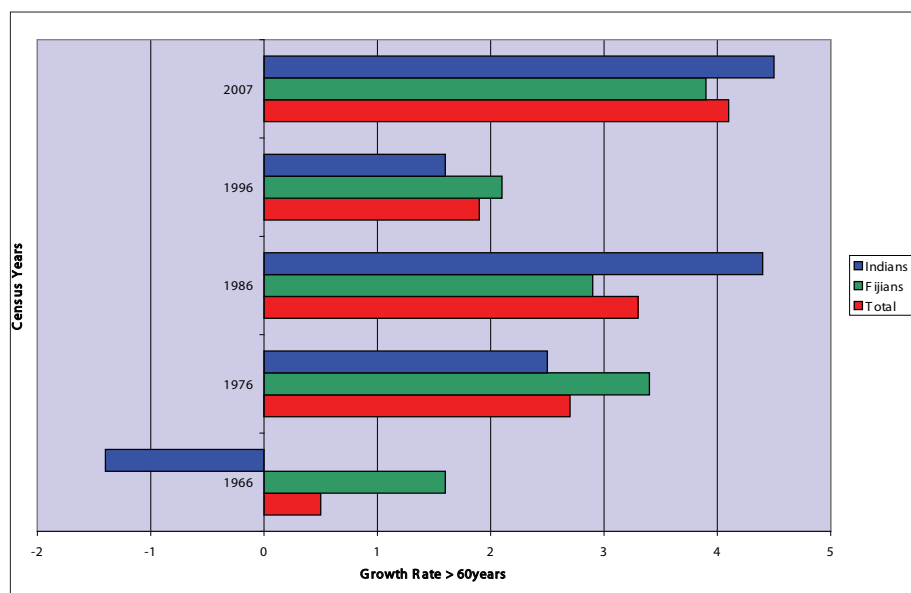
Table 2 Life expectancy rates by sex and ethnicity, 1986 to 2007

	Total Pop.			Fijians			Indo-Fijians		
	1986	1996	2007	1986	1996	2007	1986	1996	2007
Both sexes	66.9	66.6	67.5	67.0	66.5	66.4	67.1	66.5	68.5
Male	64.8	64.5	65.3	64.9	64.8	65.3	65.2	64.0	64.8
Female	69.0	68.7	69.6	69.0	68.1	67.5	68.9	69.0	72.1

Source: FIBS. Note: 2007 figures are provisional.

Growth rates

Growth rates for persons aged 60 years and over have been increasing faster than the overall growth rate. From less than the 1% average annual growth rate in 1966, it exceeded 4% in 2007. Should this growth rate continue, the current population of 62,940 persons will double before 2025. According to the 2007 census, Indo-Fijians recorded the highest average annual growth rate of 4.5%, a manifestation of the low fertility and improved mortality rates. The corresponding average annual growth rate for Fiji in 2007 was 0.7%.

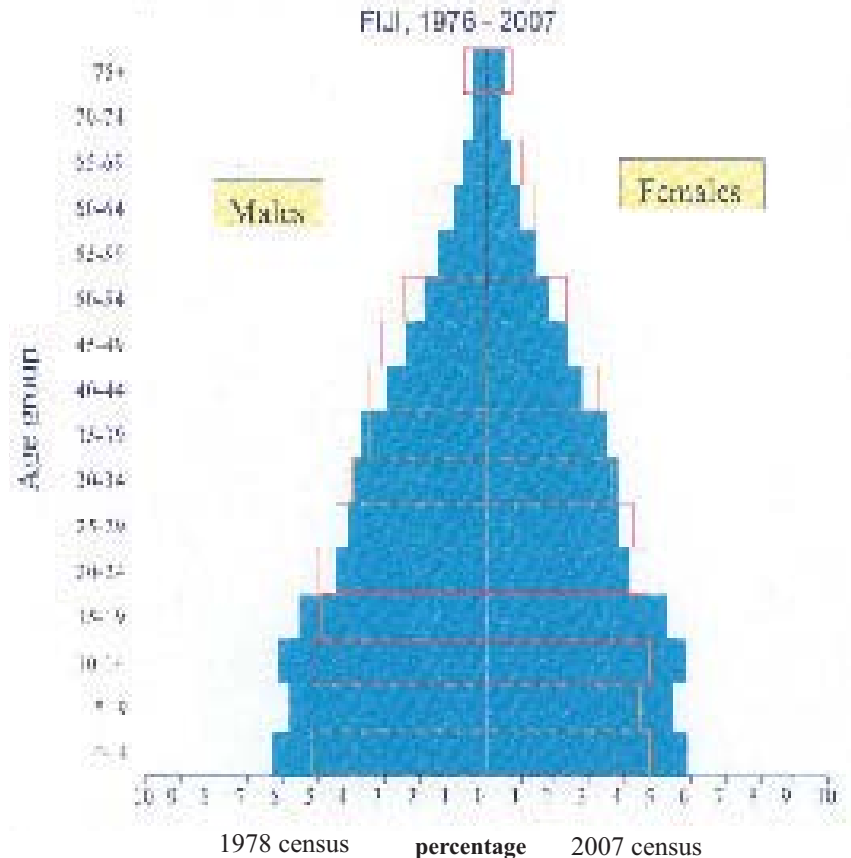
Figure 1 Growth rates for persons sixty years and over

Demographics of population ageing

Changes in the age structure

Declining fertility accompanied by increased life expectancy bring visible changes to the age structure. Figure 2 presents a population pyramid for the total population for Fiji that compares the five-year age distribution of the 1976 census with the 2007 census. The signs of an ageing population are evident in the pyramid and can be summarised as a shrinking base and a continuously expanding peak. The obvious reason for the shrinking base is the declining fertility, although there could be other reasons for it, such as selective migration or under-enumeration of young children, but there has not been any in-depth study to support these arguments. The growing proportion of the elderly is a sign of improved mortality rates.

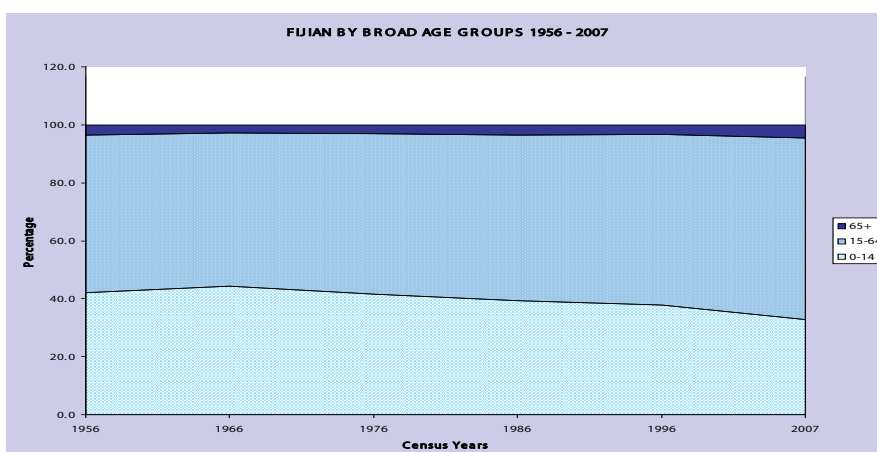
Figure 2 Population pyramid for Fiji, 1976 and 2007



Changes in the broad age groups

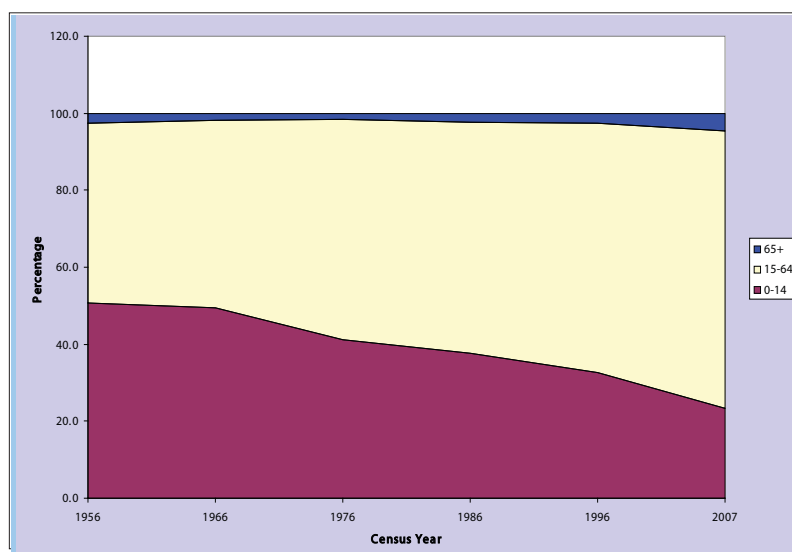
With the decline in both fertility and mortality rates, drastic changes are taking place in the age structures of the population. While persons aged less than 15 years are decreasing in number due to the declining fertility, the aged populations are increasing due to the improvement in mortality, resulting in increasing life expectancies at birth.

Fiji's population of the young people was very high at more than 46% in 1956 and fifty years later had declined by 17% to 29.0%. The corresponding figures for persons aged sixty years and over tripled from 2.3% in 1956 to 7.0% in 2007.



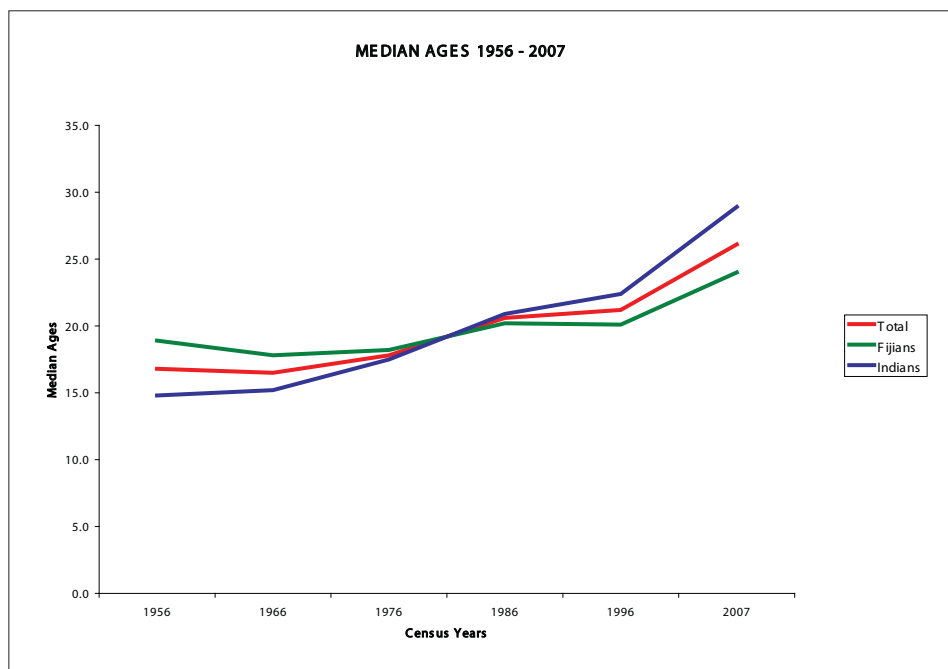
Figures 3a and 3b clearly display the share of each broad age group for both Fijians and Indo-Fijians. It is obvious from the display that the number of persons aged below fifteen have continued to decrease while the number of persons aged sixty years and over is increasing.

Figure 3a Changes in the broad age groups for Fijians 1956–2007

Figure 3b Changes in the broad age groups for Indo-Fijians 1956-2007

Median ages

The median age is defined as the age that divides the population in two equal halves. It is another indicator for ageing. The median age for Fiji's total population grew from 16.8 years in 1956 to 26.1 years in 2007. The most significant increase was noted for the Indo-Fijian females, where it more than doubled from 14.1 years in 1956 to 29.2 years in 2007. The corresponding figures for Fijians are 18.9 years in 1956 to 24 years in 2007.

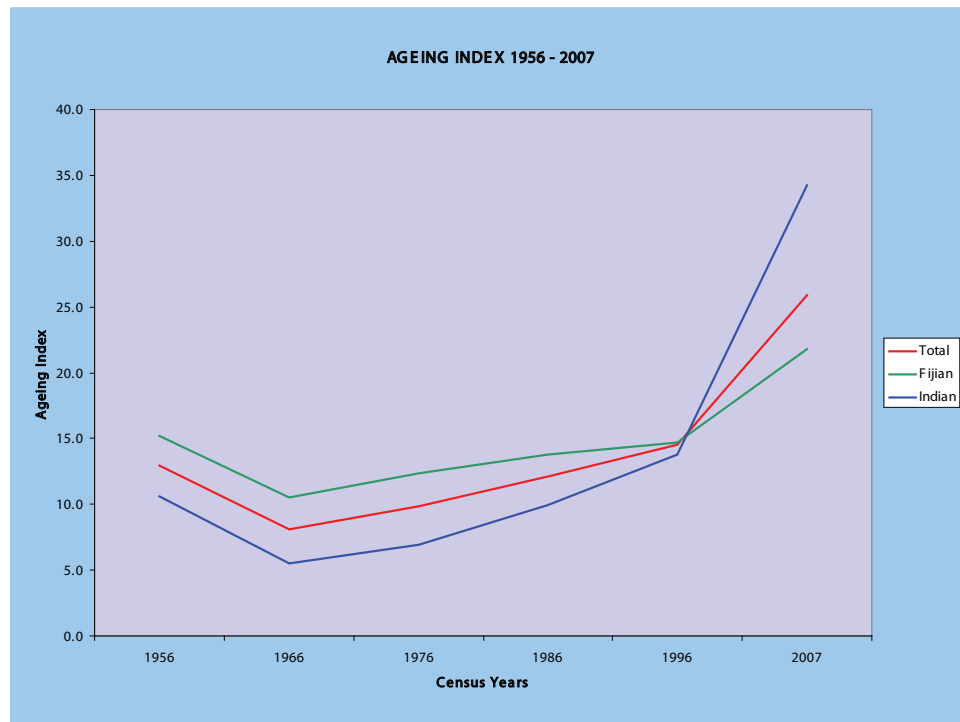
Figure 4 Median ages for Fijians and Indo-Fijians and the total population, 1956-2007

The ageing index

The ageing index refers to the number of persons sixty years and over for every 100 persons aged 0–14. An increasing index reflects the growing proportion of the elderly relative to the young. An index of 100 means that the number of elderly persons is the same as the number of 0–14 year-olds.

The ageing index for Fiji is showing an increasing trend; it almost tripled from 9.8 in 1976 to 25.9 in 2007. The index shows marked variations by gender, ethnicity and region. Females have a higher index than males, recording 28.1 against 22.7 for males. Likewise the Indo-Fijian index of 34.2 is more than one and half times that of the Fijian index of 21.8. The rural index of 26.4 is higher than the urban index of 25.3, implying the trend to return to the rural areas after retirement.

Figure 5 The ageing index for Fijians, Indo-Fijians and the total population, 1956-2007

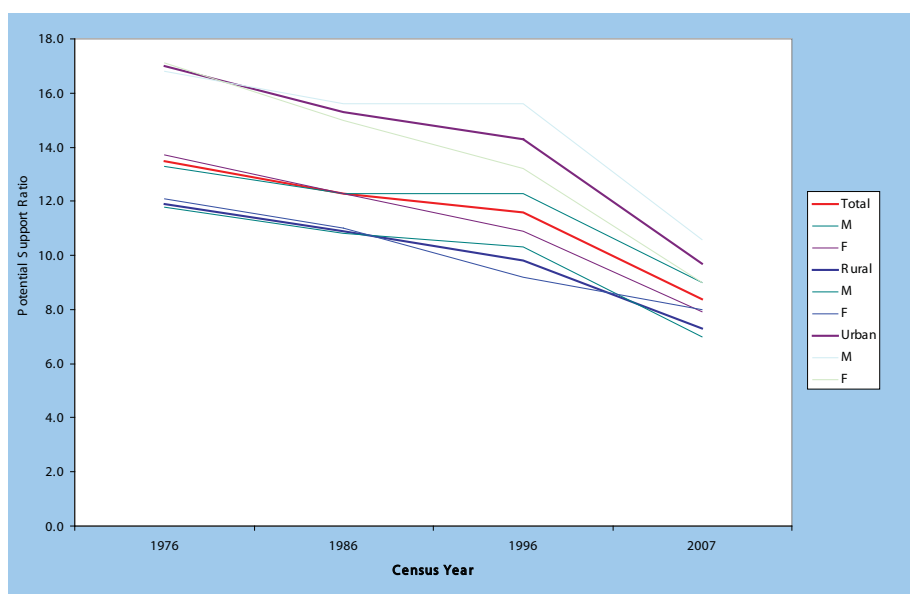


Potential support ratio

The potential support ratio is expressed as the relationship between people who are more likely to be economically productive and those who are dependent. It is the inverse of the old dependency ratio and is defined as the ratio of the number of people of working age 15-64 years to every person aged 65 years and over. The potential support ratio of 8.4 for Fiji in 2007 means that there are 8.4 persons supporting each person aged 65 years and over.

The ratio for Fiji for the three decades 1976 to 2007 declines from 13.5 in 1976 to 8.4 in 2007 (Figure 6). There are variations in the pace of decline amongst the different sub-groups in the population. The Indo-Fijian ratio decline from 19.6 to 8.6 is faster than the decline for Fijians of 10.3 to 8.4. Similarly, the rural and the urban ratio also declined from 11.9 to 7.3 and 17.0 to 9.7 respectively.

Figure 6 Potential support ratio, 1976 to 2007

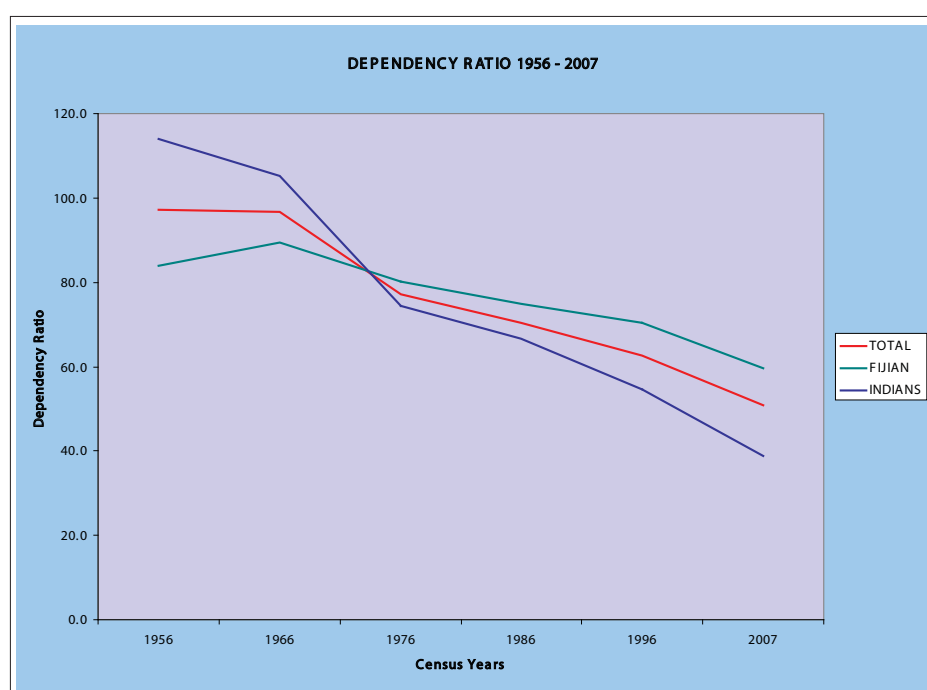


Dependency ratio

The total dependency (DPR) ratio is expressed as the sum of persons in the younger group 0–14 and older age group of persons aged 65+ as a proportion of the working age group of 15–64. It is based on the simple notion that all persons in the 0–14 and 65+ age groups are totally dependent on persons aged 15–64. Those in the working age group are assumed to be providing either direct or indirect support to those who are dependent on them.

Widely used as a social support indicator, the DPR clearly reveals the changing age structures, particularly of the three major age groups, over the years in Fiji. The high proportion of the young age group is believed to be the major contributing factor to the high DPR, as is also experienced in other countries. The total DPR for Fiji was 97.1 in 1956 and decreased to 50.8 in 2007. The most remarkable decline in the DPR was noted for the Indo-Fijians: 114.1 in 1956 down to 38.9 in 2007. The corresponding figures for Fijians are 83.8 in 1956 down to 58.8 in 2007.

Figure 7 Total dependency ratios for Fijians, Indo-Fijians and the total population, 1956-2007



Ageing differentials

Ethnic differentials

Fiji is considered a multi-ethnic nation with more than seven ethnicities represented. Two major ethnic groups dominate the composition; Fijians comprise more than half (56.8%) of the total population, Indo-Fijians comprise approximately one third (37.5%) and minority groups make up the remaining proportion. Any socio-economic analysis at the national level is meaningless unless carried out along ethnic lines because of the vast differences in the social, cultural and economic behaviour of the two major races.

At the time of the 2007 Census, 64,940 persons were recorded to be aged 60 years and over, with Fijians accounting for more than half (52.3%) of the total while Indo-Fijians and minority groups accounted for 38.5% and 9.2% respectively. While Fijians dominate the numerical value, all other indicators show that Indo-Fijians are ahead in its ageing process relative to Fijians.

The distribution of the population aged sixty years and over is shown in Table 3.

Table 3 Population aged sixty years and over by ethnicity, 2007

Ethnic Group	Number	Percentage
Fijians	33,972	52.3
Indo-Fijians	24,991	38.5
Minority groups	5,977	9.2
Total	64,940	100.0

Different patterns of fertility and mortality experienced by the two major ethnic groups over time are reflected in the different pace of ageing. Declining fertility and improvement in the life expectancy among Indo-Fijians resulted in a faster ageing process compared to the Fijians.

Table 4 displays some selected ageing indicators for the total population and for the two major ethnic groups. The median age for Indo-Fijian increased by 11.4 years, almost twice the increase of the median age for Fijians.

Similarly, the ageing index (calculated as the number of persons 60 years old or over per hundred persons under the age of 15) for Indo-Fijians increased almost fivefold, from 6.9 in 1976 to 34.2 in 2007. The ageing index for Fijians increased from 12.4 to 21.8 for the same period.

Table 4 Selected ageing indicators by ethnicity, 1976-2007

INDICATORS	Ethnic Group	1976	1986	1996	2007
Median Age	Total	17.8	20.6	21.2	26.1
	Fijians	18.2	20.2	20.1	24.0
	Indo-Fijians	17.5	20.9	22.4	28.9
Ageing Index	Total	9.8	12.1	14.5	25.9
	Fijians	12.4	13.8	14.7	21.8
	Indo-Fijians	6.9	9.9	13.8	34.2
Dependency Ratio	Total	77.1	70.4	62.6	50.8
	Fijians	80.2	74.8	70.5	59.6
	Indo-Fijians	74.5	66.7	54.6	38.9
Potential Support Ratio	Total	13.5	12.3	11.6	8.4
	Fijians	10.3	10.2	10.1	8.4
	Indo-Fijians	19.6	15.7	14.0	8.6
Average Annual Growth Rates for 60yrs +	Total	2.7	3.3	1.9	4.1
	Fijians	3.4	2.9	2.1	3.9
	Indo-Fijians	2.5	4.4	1.6	4.5

The total dependency ratios for Indo-Fijians decreased by 35.6 compared to a decrease of 20.6 for Fijians during the three decades. The decline in the total dependency ratio is a reflection of the decrease in the number of young persons that used to account for a large proportion of the age distribution, often more than 40% of the total population. Likewise, the potential support ratio also decreased: from 19.6 in 1976 to 8.6 in 2007 among Indo-Fijians from 10.3 in 1976 to 8.4 in 2007.

Average annual growth rates for Fijians and Indo-Fijians aged sixty years and over vary. While the total average growth rates were recorded as 4.1% in 2007, corresponding rates for Indo-Fijians and Fijians were 4.5% and 3.9% respectively. Should these rates continue, the number of Indo-Fijians in this age group will double in fifteen years, while it will take Fijians 18 years and the total population 17 years for that age group to double.

Regional differentials

Given the low fertility and improved mortality in the urban areas, one would think that the ageing process would be faster in the urban areas than in the rural areas. However, this is not the experience for Fiji, where the ageing process is concentrated in the rural areas. The 2007 census recorded a higher concentration of elderly people in the rural areas, accounting for more than half the total population of that age group, 54%, while 46% live in the urban centres. This has been the pattern of population distribution for persons aged 60 years and over in the last three decades but the difference is narrowing, as shown in Table 5.

Table 5 contains some selected ageing indicators to show the variation in the ageing process between the rural and urban regions for Fiji. The ageing index increases over the three decades, indicating the increasing proportion of old people, and is in each case higher in the rural areas than in the urban areas, but the difference is narrowing over the years.

The variation in the ageing process between rural and urban areas is believed to be due to rural to urban migration. The pattern of selective migration, where the young and those in the working age population move to the urban centres in search of better opportunities, leaves the old people behind in the rural areas. Another theory is that retirees return to rural areas and settle in the rural areas.

Table 5 Selected ageing indicators for rural and urban areas, 1976-2007

Selected ageing indicators	1976		1986		1996		2007	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Population	68.3	32.7	67.4	32.6	60.4	39.6	54.0	46.0
Ageing Index	10.2	9.1	12.9	10.7	15.3	13.5	26.4	25.3
Potential support ratio	11.9	17.0	10.9	15.3	9.8	14.3	7.3	9.7

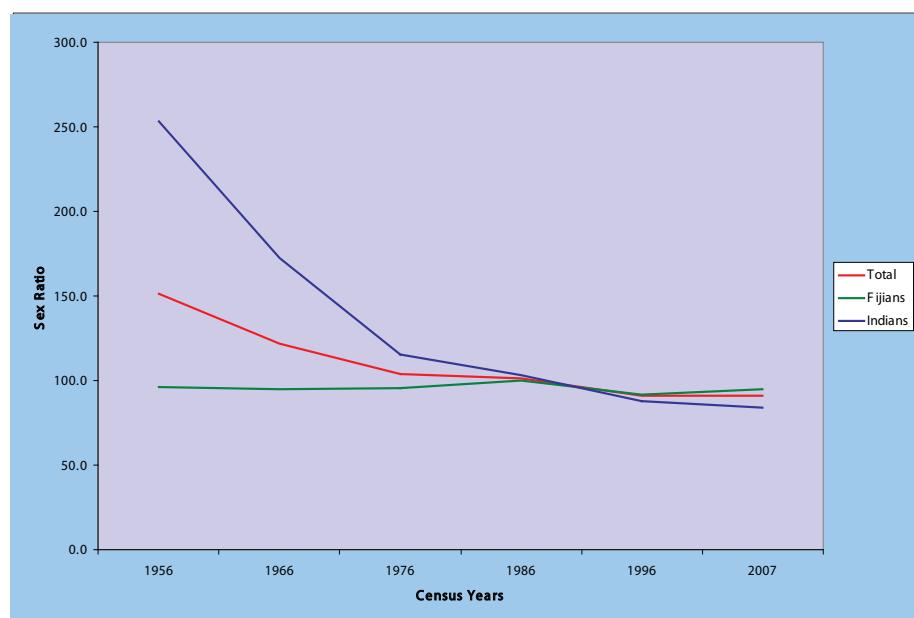
The feminisation of ageing

Females are generally known to live longer than males, so there is a corresponding larger concentration of older females than males. The 2007 census in Fiji recorded 52% females and 48% males in the 60–74+ age group (Table 6). Larger variations are noted for older ages, reflecting a higher life expectancy for females than for males. Provisional figures for 2007 indicate a life expectancy of 69.6 years for females and 67.5 for males.

Table 6 displays the percentage distribution of persons aged 60 years and over by ethnicity and sex. Females continue to dominate the proportion in each age group, accounting for more than 50% of the total population except in age group 60–64 where Fijian females accounted for 49.2%.

Table 6 Percentage distribution of persons aged sixty years and over by sex and ethnicity, 2007

Age Group	Total %		Fijian %		Indo-Fijian %	
	Males	Females	Males	Females	Males	Females
60–64	49.6	50.4	50.8	49.2	47.5	52.5
65–69	48.2	51.8	49.6	50.4	45.7	54.3
70–74	46.6	53.4	47.9	52.1	44.0	56.0
75+	44.0	56.0	44.3	55.7	42.7	57.3
Total	47.7	52.3	48.7	51.3	45.6	54.4

Figure 8 Sex ratio for Fijians and Indo-Fijians and the total population, 60 years and over, 1956-2007

The sex ratio (the ratio of males to females) for persons aged sixty years and over for the last fifty years has shown a remarkable decline from around 150 males for every 100 females in 1956 to 88 in 2007. The highest sex ratio was recorded for Indo-Fijians in 1956, when the number of males more than doubled the number of females in the 60 years and over age group. Some possible reasons for the high sex ratio for Indo-Fijians could be the high mortality for females, particularly maternal mortality. Maternal mortality is often related to early marriage, accompanied by high fertility and poor maternal health care. This does not rule out the spillover effect of the selective migration under the Indentured Labour System which, though it ended in 1916, was still reflected in the higher proportion of males in the elderly forty years later.

Conclusions

Evidence has shown that there are variations in the ageing process in Fiji. Ageing is noted to have accelerated more quickly amongst the Indo-Fijians than the Fijians. The reasons noted are the continued decline in the level of fertility and the improvement in life expectancy.

Figures also show that more persons aged 60 and over live in the rural areas than in the urban centres. The notion of better facilities in the urban centres, and hence a higher proportions of the elderly, is nullified in this study, as selective migration of the younger generation increases the proportion of elderly in the rural areas.

Females are noted to comprise a larger proportion of the elderly population than males. The increasing proportion of the females adds another dimension to overall policy implications.

Policy implications

Developed countries have already formulated and implemented appropriate policies that are related to ageing issues. The experience in the developing countries is slightly different, as other urgent social issues such as unemployment, housing, water and sewerage are considered to need more prompt attention than ageing issues. However, in spite of this mindset, ageing issues are currently emerging to create an additional burden that is hard to ignore.

- Increased life expectancy does not rule out an increased incidence of morbidity. Non-communicable diseases (NCDs) take over from the infectious and nutritional causes of morbidity. NCDs require longer medical care.
- Long term care: the incidence of disability increases with population ageing.
- Living arrangements: it has been the cultural responsibility of the children to take care of their elderly parents or relatives in both Fijian and Indo-Fijian societies. This may shrink as a result of nuclearisation of families and reduction in family size. There is also an increase in the number of women joining the labour market; daughters and daughters in-law are traditionally expected to look after their elderly parents and relatives. There may be a need for more institutional care to supplement the family living arrangement.
- Income and social security.
- Protection against abuse and violence.

The way forward

- Establish a national co-coordinating body that will look after the welfare of the elderly.
- Conduct more research and in-depth studies for baseline data to highlight specific issues that can be addressed by appropriate policies.
- Strengthen the traditional/family role with regard to caring and looking after the welfare of the elderly.
- Continuously promote the positive aspects of ageing to counter the negative image.
- Review the retirement and pension benefits to ensure that the welfare of retirees and pensioners is adequately addressed.

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Plenary 4

Universal access to reproductive health: the case for family planning

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Family planning in the Pacific

Annette Sachs Robertson

Introduction

Access to sexual and reproductive health is a fundamental human right. Universal access to sexual and reproductive health, particularly family planning, includes access to contraceptive information and commodities by vulnerable and underserved populations. Narrowing avoidable disparities in sexual and reproductive health is critical so as to ensure poor, marginalized and vulnerable groups are given equal opportunities for improving their lives.

Even in key development initiatives like the Millennium Development Goals (MDGs), health equity analysis often remains simplistic (Wirth et al. 2006). Aggregate measures of health often do not capture inequalities to health as national averages may hide differences in health status, health care and health financing (USAID 2007; Houweling et al. 2007). Where aggregate reproductive health indicators are improving, some health gaps between population groups may be widening or remaining unchanged. Some studies have revealed that countries with large economic inequalities also exhibit large inequalities in modern contraceptive use (Gakidou et al. 2007). For Pacific Island populations, often the vulnerable and underserved populations are indefinable, especially in countries where absolute poverty is not evident. Furthermore, the unavailability of time series reproductive health data by socioeconomic status and vulnerable groups makes the assessment of changing reproductive health status of subgroups difficult.

At the International Conference on Population and Development (ICPD) in 1994, a global paradigm shift occurred from family planning being undertaken to meet national targets of fertility reduction to an individual rights-based approach to contraception availability and fertility self-regulation. Principle 8 of the ICPD Programme of Action illustrates this paradigm shift:

States should take all appropriate measures to ensure, on a basis of equality of men and women, universal access to health care services, including those related to reproductive health care, which includes family planning and sexual health. Reproductive health care programmes should provide the widest range of services without any form of coercion. All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so.

In ensuring that countries adequately apply the concept of universality of reproductive health rights, ICPD further states:

Government goals for family planning should be defined in terms of unmet needs for information and services. Demographic goals, while legitimately the subject of government development strategies, should not be imposed on family planning providers in the forms of targets or quotas for the recruitment of clients. (ICPD paragraph 7.12)

While 179 countries, including the Pacific Island Countries, adopted the ICPD Programme of Action, subsequent to ICPD, globally and in many Pacific Island Countries (PICs), there was less focus on the promotion of voluntary family planning due to several factors including competition for funding due to the emerging HIV epidemic; political sensitivities concerning sexual health; and perceived incapacity of governments to absorb further donor funding (Robertson 2007, Guest 2006, Guest 2003, White 2000). The lack of focus on sexual and reproductive health including family planning was evident when reproductive health, including family planning, was not fully recognised as a Millennium Development Goal (MDG). It was only in 2006 that a new target “achieve universal access to reproductive health” was added to Goal 5, which highlighted the need to address unmet need for family planning as a means of achieving poverty reduction¹.

Relatively high fertility rates, persistently low contraceptive prevalence rates, high teenage fertility rates and, more importantly, an implicit high unmet need for family planning among vulnerable groups highlight the need for repositioning or revitalizing family planning in the Pacific.

¹ Definition of unmet need for family planning: The proportion of sexually active women of reproductive age (15–49) who want to postpone or stop childbearing, but who are not currently using any contraceptive method.

Rationale and purpose

The purpose of this paper is to explore the progress PICs have made in achieving universal access to reproductive health, specifically focusing on family planning, and to analyse the inequalities to contraceptive services in selected PICs identifying the underserved groups. It will explore the factors related to contraceptive use and unmet need for family planning in selected countries.

The paper will provide emerging evidence from Demographic Health Surveys (DHSs) that can be used to inform policy and programming strategies for improving voluntary family planning. It will discuss policy and programming options for addressing these needs through repositioning family planning in the national development agenda.

Background

Historical perspectives on fertility control and family planning in the Pacific

Leading demographers have questioned the assumption that fertility trends were very high in the Pacific prior to contact by Europeans; i.e., the pre-transition period and up to the beginning of the 20th century (Pirie 1994; Connell 1977). The concept that historically some Pacific island populations, particularly those residing on small islands and atolls and in the highlands of Papua New Guinea, have been involved in fertility control to ensure environmental sustainability and population homeostasis, due to limited available resources, is considered by several demographers and supported by certain demographic anomalies.

Traditional cultural practices and beliefs may have contributed to low fertility rates in Pacific Island societies. Long periods of post-partum taboos on sexual intercourse as long as three to four years, prolonged lactation, delayed marriage, abstinence in marriage, traditional forms of contraception, abortion and infanticide have been thought to have contributed to fertility control in some traditional Pacific societies, particularly in small islands populations of Melanesia, Polynesia and Micronesia, that have limited resources (Tsfaghiorghis 1995; Lucas & Ware 1981; Connell 1977; Borrie et al. 1957). Furthermore, the placing of a high value on premarital virginity is a cultural practice of many Pacific societies, including Samoa, where the “taupou” or ceremonial virgin was honoured (Pirie 2000). The practice of abstinence during agricultural planting and harvesting, fishing and warfare was also practised and may have contributed to low fertility rates. The belief that the male sperm adversely affects the mother’s milk, causing the child to be sick, encouraged postpartum abstinence and may have contributed to birth spacing and limiting the number of children a woman would otherwise have had.

Studies have shown that in some societies in Papua New Guinea there was an explicit intent to limit family size through abortion, contraception, induced sterility and infanticide keeping fertility at modest levels (McDowell 1988). In Kiribati, historical data suggests that fertility was relatively low, probably in the range of four children per woman, prior to 1920s (Tsfaghiorghis 1995).

As traditional systems began to disintegrate, following colonization, the ability of the individual woman to have children increased as a result of the abandonment of traditional practices and an imposed adherence to Christian values. Societies became more inclined to less effective post-partum abstinence practice, less abstinence during marriage, less traditional contraception and the criminalization of abortion and infanticide. Consequently, fertility rose substantially also as a result of the Christian pronatalist belief that children were ‘gifts from God’.

The first censuses, undertaken after World War II, revealed very high fertility rates in several countries in Polynesia, Melanesia and Micronesia. In Kiribati, it is estimated that fertility rates were as high as 6.3 children in the mid 1950s (Tsfaghiorghis 1995). In Cook Islands, censuses reveal high past fertility rates, total fertility rates (TFRs) up to 9.2. The beginning of the demographic transition with high fertility and high mortality rates was already underway as mortality rates decreased and modern family planning was introduced.

Family planning programmes were initiated in the late 1950s and early 1960s in an attempt to enhance socioeconomic development through population reduction as well as to improve women’s and children’s health (House 1999). Among the earliest to institute family planning programmes were the colonial governments of Fiji and Tonga in 1958 with an official policy in place by 1962 (Pirie 1995; Ivarature 2000). Not only did the Fiji Medical Department take on the responsibility of family planning but also the Family Planning Associations (affiliated to International Planned Parenthood Federation (IPPF)) became active. IPPF surveys and surveys on

population growth provided the initial impetus for these Family Planning programmes. The Fiji programme was considered a success as fertility rates of Indian women immediately declined and of ethnic Fijian eventually declined, albeit at a slower rate in the 1970s (Levin & Retherford 1986). Differential rates of fertility between the two major races in Fiji have persisted and are well documented.

In Tonga, initiation of the Family Planning Programme in 1965 was also supported by the King of Tonga, Tupou IV, who expressed concern about increasing population size, density of the population in Tongatapu and declining size of land allotments. The programme was institutionalized when a Tongan medical officer became responsible for the Family Planning Programme, a family planning clinic was opened and the number of family planning acceptors increased over time (Ivarature 2000). The integration of the family planning programme with the maternal and child health programme occurred around 1968 and contributed to high levels of acceptors being noted. The formation of the Tonga Family Planning Association in 1969 further strengthened advocacy for family planning. In subsequent years of the seventies and eighties, the inclusion of family planning in national development plans heightened the commitment to family planning. In 1976, a survey reported 45.7 per cent of all women of reproductive age were using contraception with the highest level of 63.3 percent recorded in Kolonga, Tongatapu. The survey revealed that acceptors were young, using highly effective contraceptive methods and had fewer children once they adopted family planning.

In Kiribati, family planning was initiated in the sixties and the family planning campaign was officially launched in 1968 (Tesfaghiorghis 1995). While fertility overall declined in all age groups between the 1960s and 1990s from approximately 7.0 to 4.5, the decline was much slower after 1973, concomitant with the waning of the family planning programme and the integration of the family planning and the maternal and child health programme (Booth 1994). In 1972, the percentage of family planning users among women of reproductive age was 40.1 per cent. However, there was significant opposition to the family planning programme, particularly by the Catholic church and traditional leaders. The family planning programme stalled in the seventies and the percentage of users dropped to 15.8 per cent. By 1990, the contraceptive prevalence use rate was approximately 27 per cent; a level which fell short of the national target of 35 per cent. The relatively high percentage of users on injectables (60%) was noted in the 1980s but with time, the ovulation method became the more frequently used method and the use of injectables declined to 39 per cent. Fertility studies have found significant religious and geographic variations with higher fertility rates in outer islands and among Catholics. The geographic differentials were also reflective of the religious compositions of the islands. Similarly, higher fertility rates were also noted among women with lower education. It was not until 2000–2005 that there was a new decline in the TFR from 4.5 in 1995 to 3.5 in 2005.

Other countries in the Pacific also initiated family planning programmes with modest success (Kenyon & Power 2003). The Republic of the Marshall Islands (RMI), Federated States of Micronesia (FSM), Papua New Guinea (PNG), Solomon Islands and Vanuatu – countries considered to have high fertility and some of the atolls with high population densities– all show some decline in fertility, suggesting that for all, the peak fertility may already have been reached (Pirie 1994). Negative reactions and fear of side effects were often reported by women. Papua New Guinea and Solomon Islands adopted population policies aimed at population control but data on patterns of contraceptive use over time is limited in these countries.

While family planning was considered a central tenet of sexual and reproductive health and rights in the ICPD Programme of Action, family planning programmes were given lower priority in the period following 1994, globally as well as in the Pacific. The diminishing emphasis on family planning in the Pacific also paralleled the significant increase in religious and political conservatism and the lack of recognition of universal access to voluntary family planning as an explicit strategy for reducing poverty.

While the impact of family planning programmes on fertility rates has been highly significant in many Asian countries, possibly exceeding the impact of socioeconomic factors such as rising income (Bloom et al. 2002), not all family planning programmes may have been equally successful in the Pacific. Despite the presence of these government-run voluntary family planning programmes, safe and effective voluntary contraception services based on informed choice and a wide range of options, have not been fully realized in the majority of Pacific island countries (PICs) (Robertson 2007).

Demographic considerations

Any discussion of demographic considerations in the Pacific should acknowledge the wide diversity that exists

among populations. Countries like the Cook Islands possess a pronatalist approach with high level discussions of a proposed repopulation strategy while countries like Kiribati, Papua New Guinea and Solomon Islands consider an antenatalist approach: means for curbing population growth as a means of poverty reduction and socioeconomic development.

Delayed fertility transition and rapid population growth

Total Fertility Rates are currently between 3.5 and 4.5 in FSM, Kiribati, Nauru, RMI, Tonga and Tuvalu – and above 4.5 in PNG, Samoa, Solomon Islands, Tokelau and Vanuatu (Table 1). Only Palau has completed the fertility transition (TFR at or below 2.1). Fiji, Cook Islands and Niue have TFRs just below 3.

The demographic “window of opportunity” appears when rapidly declining fertility reduces the number of dependent children in a population while at the same time the number of dependent elderly persons is still relatively low because increasing longevity takes many years to produce a growing older population. This situation is reflected in a declining dependency ratio and therefore a declining economic burden for persons of working age.

While most countries in East Asia have already experienced the bulk of their demographic bonus (Mason 1997, 2001, 2006, Navaneetham 2004, Westley 2002), such trends are still several decades away in the PICs where fertility decline is slow and dependency is mostly above 65 (except Fiji, Niue and Palau) and reaching above 80 in RMI, Samoa, Solomon Islands and Vanuatu (Table 1) (Rallu J & Robertson A 2009).

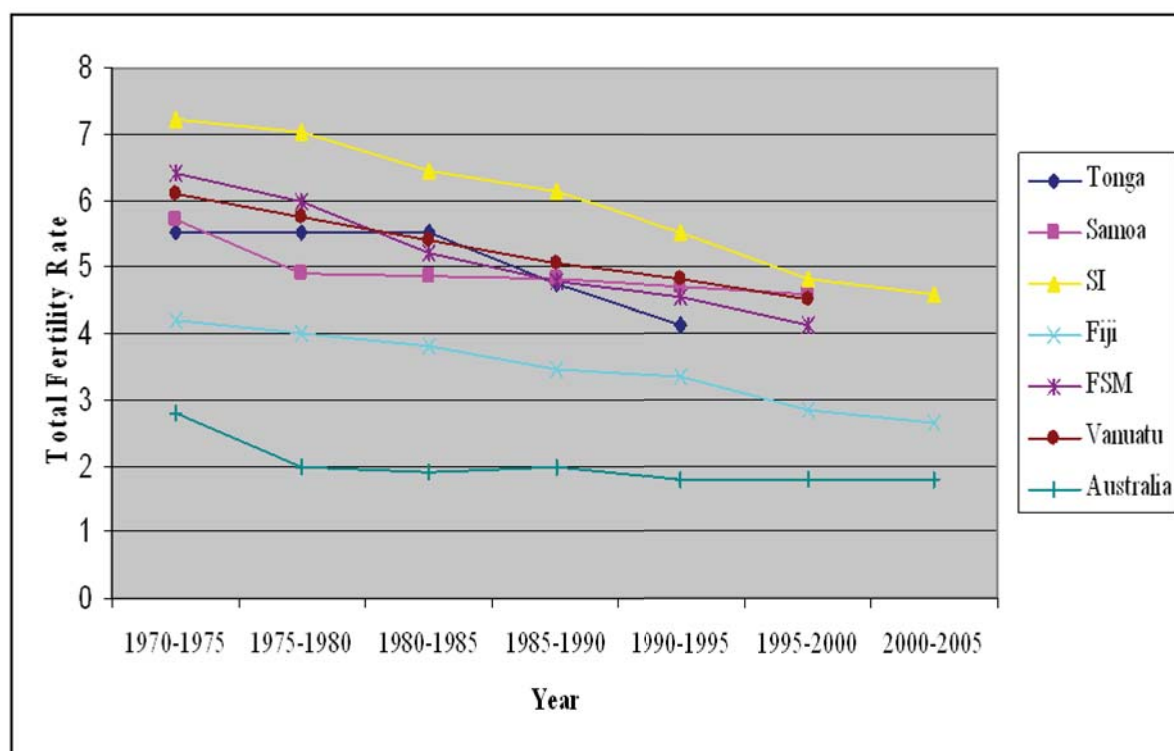
Table 1 Population (mid-2006 estimate), Total Fertility Rate, Growth rates (%), Proportion of population 15-24 yrs, at latest census date available.

Country (last census date available)	Population mid-2006 ,000s	Total Fertility Rate	Natural increase (%)	Inter-censal growth rate	Dependency ratio	Population 15-24 (%)
Melanesia						
Fiji (1996)	831.3	2.7	1.7	0.7	62.6	19.4
PNG (2000)	6187.1	4.6	2.3	2.7	73.5	19.8
Solomon Is (1999)	487.2	4.6	2.7	2.8	81.6	21.1
Vanuatu (1999)	221.4	4.8	2.2	2.8	85.7	17.8
Micronesia						
Kiribati (2005)	93.5	3.5	1.8	1.8	68.1	20.9
FSM (2000)	110.2	4.1	2.3	0.2	78.6	21.3
RMI (2009)	52.1	4.5	2.6	0.7	82.5	21.4
Nauru (2002)	10.1	4.0	2.3	0.3	66.2	22.1
Palau (2005)	20.0	1.9	1.3	0.8	42.5	13.7
Polynesia						
Cook Is (2001)	15.9	2.9	1.5	1.6	67.9	15.6
Niue (2001)	1.6	3.0	1.1	-1.9	63.7	15.0
Samoa (2001)	179.2	4.6	2.7	0.3	82.7	18.0
Tokelau (2006)	1.4	4.9	2.4	-1.0	73.7	19.0
Tonga (1996)	101.1	3.8	2.1	0.3	79.5	20.1
Tuvalu (2002)	9.7	3.7	1.6	0.5	72.0	15.8

Source: Rallu J, Robertson A. Pacific Perspectives 2009: Crises and Opportunities. ESCAP. The Demographic Window of Opportunity in Pacific Island Countries: Future Prospects. Primary Data Source: SPC

The delayed fertility decline is evident in the slow fertility decline of the Solomon Islands or Vanuatu or the stable or quasi stable fertility, of Samoa and Tonga where the TFR has stalled or is occurring in steps (Figure 1). Most countries show slowing of the decline when TFR approaches 4 (as in Fiji from 1970–1975 or Samoa from late 1970s). A similar trend is observed in RMI (1990–2000 where fertility stabilized suddenly after a rapid drop in the 1990s). Kiribati's TFR shows a more complex pattern with early decline to 3.5 in 1970–1975 followed by an increase to 4.5 until mid 1990s and a subsequent decline to 3.5 in 2005 (Data not shown).

Figure 1 Total Fertility Rate in selected Pacific Island Countries, 1970–2005



Source: Rallu, JLR; UNFPA, 2008

As in many countries, intra-national differences in fertility exist. Due to a sharp decline in the Indo-Fijian population, Fiji has exhibited a more rapid decline. However, since the late 1990s, Indo-Fijian fertility has stabilized as it has completed fertility transition and is now below replacement (1.9 in 2004). A slow decline of indigenous Fijian fertility (from 3.5 in 1996–2000 to 3.3 in 2001–2004) is now revealed in the pace of Fiji's overall fertility decline.

Fertility levels appear to be also related to reproductive health programmes and low contraceptive prevalence (Haberkorn, 2004). With the exception of FSM (the validity of the reported CPR is questionable), no country has achieved a 50% CPR. While it is recognised that the relationship between CPR and TFR is not linear or direct, for most countries in which there are particularly high total fertility rates ($TFR > 3$) CPRs were generally below 30% in 2005 (Kiribati, Solomon Islands, Tonga, Tuvalu and Vanuatu) (Table 2). However, FSM and RMI are exceptions where TFR exceeds 4 and the CPR also exceeds 40 raising the issue of validity of contraceptive data. Table 2 also reveals rates of TFR and CPR that appear incongruent, such as in Palau where TFR is very low but CPR is also reported as very low.

In some countries, high emigration rates appear to contribute to maintaining a high level of fertility. From a demographic perspective, with high emigration in the smaller Polynesian countries, a high TFR is needed to keep the population stable. Moreover, as emigration is an economic strategy at the family and national level, often the prevailing perception is that children are needed to ensure a constant flow of migrants who will send remittances. Thus, in these countries, stable fertility may be considered part of an economic strategy and missing the demographic window is not an issue as the economy at the society and family level is supported by remittances (Peng et al. 2005).

Table 2 Recent Total Fertility Rates, Age Specific Fertility Rate (15-19 years), Contraceptive Prevalence Rates for selected PICs

COUNTRY	TFR ¹	ASFR (15–19 YRS) ^{1,2}	CPR ³
Cook Islands	2.9	55	43.8
FSMic	4.1	61	56 ⁴
Fiji	2.7	54	44
Kiribati	3.5	71	21 ⁴
RMI	4.5 ⁵	138 ⁵	43 ⁵
Nauru	3.4 ⁵	69 ⁵	25 ⁵
Niue	3.0	35	na
Palau	1.9	63	17.2
Samoa	4.6 ⁵	45	42.6
Solomon Is	4.6	67 ⁵	27 ⁵
Tokelau	4.9	45	na
Tonga	3.8	18	32.8
Tuvalu	3.7	36	31.6
Vanuatu	4.8	92	28

Sources:

¹ Latest census data 1996-2006, UNFPA 2008

² ICPD+10 Progress Report in the Pacific. UNFPA. 2005 – MOH source

³ Pacific Regional MDG Report. 2005

⁴ SPC, 2006

⁵ Solomon Islands, RMI, Nauru DHS Reports 2007–8 (current modern contraceptive use for married women)

Factors governing fertility decline are complex and also relate to determinants of marriage, conception and fetal mortality (Bryant 2007; Seetharam 2002; McNicoll 1991). They may also relate to educational levels, participation in paid employment, increasing wealth and urbanization with women modernizing their attitudes to family planning and preferences for smaller families. Chung found that in Kadavu other factors were also relevant, such as alternative opportunities of living elsewhere than in rural villages, which affected their preference for limiting their fertility (Chung 1990). In this study it was recognized that family planning actually benefited the already privileged group and that women without alternative options were less likely to opt for fertility control.

Thus, the socio-cultural context and political decisions governing contraceptive use as well as proximate determinants of fertility have strongly influenced stalled fertility transition in

PICs (Rallu J & Robertson 2009). The issue in the Pacific is whether rapid declines in fertility, population growth rate and dependency ratio will bring earlier a demographic window of opportunity. The Pacific faces a multifaceted issue linked to delayed fertility transition that consists of high dependency ratios, rapid population growth (unless it is reduced by emigration) and a substantial youth bulge.

Youth bulge, teenage fertility rates and demographic transition

The youth bulge is reflected in the high numbers of young people in most countries in the Pacific. Approximately 60% of the population is less than 25 years of age. In most PICs in Melanesia and Micronesia, except Palau, populations comprise 20% of youth. In Polynesia, youth generally represent around 15% of the population, except in Samoa (18%) and Tonga (20%). This youth bulge further slows progress for demographic transition. Large youth populations often result in high unemployment and concomitant poverty.

The demographic situation is further complicated by high rates of unintended teenage pregnancies. In some Pacific island countries, young people are amongst the most highly underserved groups with high unmet need for contraception reflected in their high teenage fertility rates (age specific fertility rates of 15–19 year old persons). While Kiribati, Nauru, and Solomon Islands teenage fertility rates are high, RMI and Vanuatu have teenage fertility rates that are among the highest in the world. The unintended teenage pregnancies are the consequence of low contraceptive use among sexually active young people, low levels of knowledge, high prevalence of unsafe sexual behaviour among young people and lack of empowerment of young women and girls. The current reproductive health services and strategies for risk behaviour modification need further strengthening in order to reach young people.

Such situations can push disadvantaged groups into a cycle of poverty, particularly those young women who have early births and large families, incomplete education and who are unable to secure formal sector employment. In many Asian countries, adolescent fertility is highest in the poorest wealth quintiles (Bernstein 2002; Jones

1997). Such information is becoming more available in the Pacific with the advent of the Demographic Health Surveys.

In many PICs, further strengthening of adolescent sexual and reproductive services and information is required to address the unmet need for contraception and more opportunities for employment of the youth need to be provided if the opportunity for accelerated economic growth that occurs with the demographic window is to be realized.

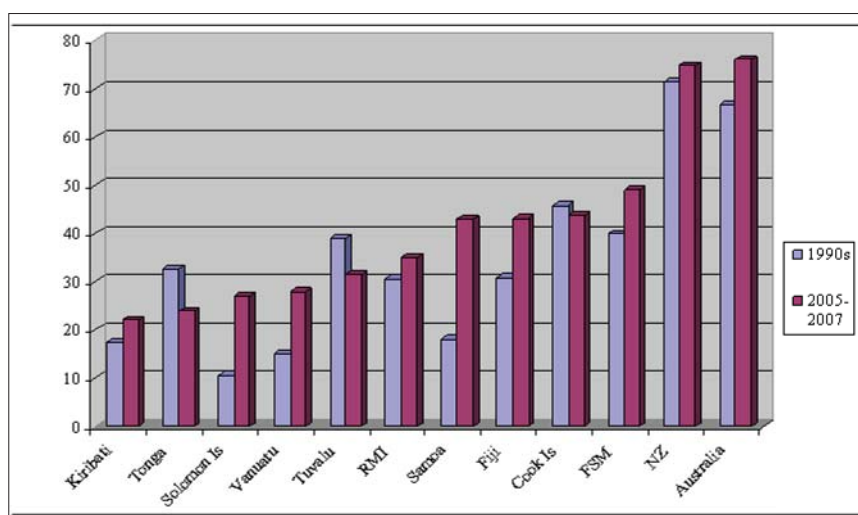
Contraceptive use: progress in selected countries

Strong traditional values that limit women's empowerment and decision-making in reproductive health matters contribute to low contraceptive prevalence in some Pacific Island Countries, such as Solomon Islands and Kiribati. Traditionally, Pacific Islanders have had a preference for larger families believing that having more children is an investment which will enrich them later in life through the larger number of children contributing to their socioeconomic welfare. However, recently desired family size may be changing as suggested in PNG's 1996 and 2006 DHSs. In some societies, religious beliefs also contribute to the low level of contraceptive use. Other key factors that may contribute to low contraceptive prevalence in the Solomon Islands, and possibly many other PICs, include lack of access to services, lack of transportation and finances, lack of knowledge of contraceptive methods and benefits, and concerns about side effects (SPC 2008).

While it appears that for the majority of countries, CPRs have increased since 1990, in Cook Islands, Tonga and Tuvalu rates in 2005-6 appear lower (Figure 2). In other countries where increases have occurred since 1990, such as Solomon Islands, Vanuatu and Kiribati, reported rates of contraceptive use remain relatively low (below 30%). In many countries, such as Fiji, where the CPR exceed 40%, there have been stagnations in rates of contraceptive use in recent years.

The under-reporting of contraceptive use by Ministries of Health (MOH) is not uncommon in some countries where significant declines in TFRs have occurred without concomitant increases in CPRs. Women accessing contraceptives from private pharmacies, private practitioners and non-governmental organisations (NGOs) are often not routinely captured in MOH data on CPR. Validation of the CPR, especially by age, is urgently needed in most PICs.

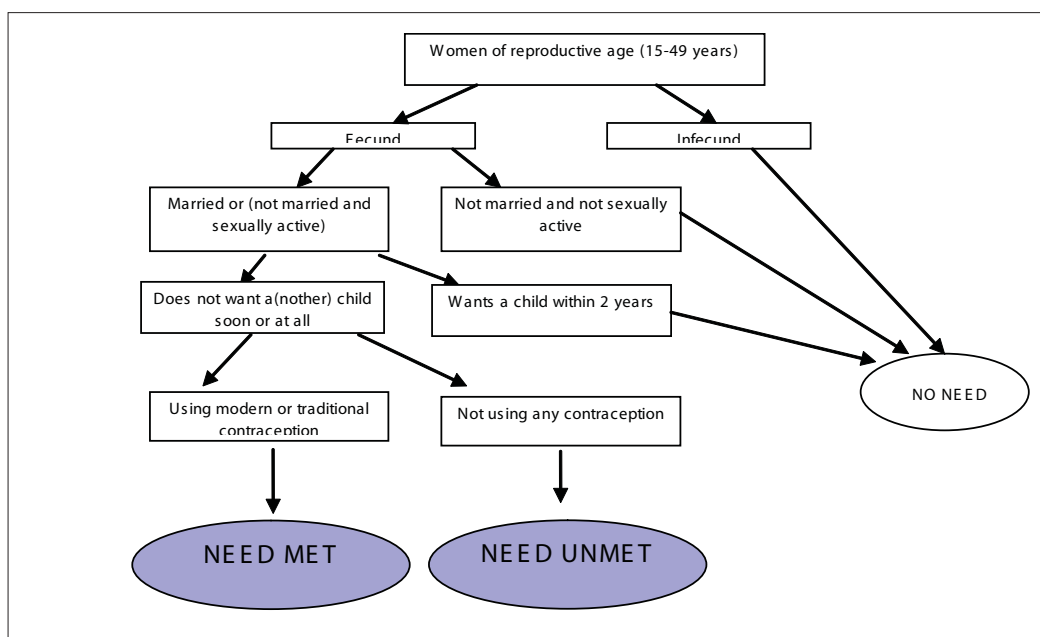
Figure 2 Contraceptive Prevalence Rates in selected Pacific Island Countries, 1990–2005/7



Source: UNFPA, based on PIC MOH statistics

Unmet need for Family Planning

Unmet need for contraception is the desire to limit or postpone childbearing but not using any contraceptive method (Casterline & Sinding 2000, DeGraff & de Silva 1996, Westoff & Bankole 1995). It is the preferred criterion for determining the success of family planning programmes (Ayad 2009, Ojaka 2008, Schoemaker 2005, Westoff 2001, Shelton et al. 1999, Dixon-Mueller & Germain 1992) (Figure 3).

Figure 3 Characteristics of women with unmet need, met need, and no need for contraception

Source: Bizuneh, Shiferaw, & Melkamu, Macro International Inc, 2008

Few countries in the Pacific possess two measurements of this indicator. Unlike other regions in the world, Demographic Health Surveys (DHSs) and Reproductive Health Surveys (RHSs) have not been common in the Pacific. Only two countries in the Pacific (PNG and Samoa) had had a DHS conducted prior to 2006 and two countries (Fiji and Cook Islands) had an RHS; only four countries had measures of unmet need for contraception. Thus, time series data on unmet need for contraception for most PICs, with the exception of Papua New Guinea, is currently not available (Table 3). Demographic Health Surveys have been conducted in Nauru, Tuvalu, RMI and Solomon Islands in 2006–8. Surveys are currently being undertaken in Kiribati, Samoa and Tonga and future surveys are planned in another three countries over the next five years. Results from recent DHSs reveal high unmet need for family planning in most PICs. Fertility and Reproductive Health Surveys conducted in Fiji and Samoa in 1995–6 do not provide summary statistics for unmet need; however, the unmet need for contraception (for limiting the number of children) is extremely high in both age groups reported in Samoa and in both the major racial groups in Fiji. House reported unmet need for contraception for limiting size as 24% in Vanuatu in 1999 (House & Ibrahim 1999).

Table 3 Unmet need for family planning for selected Pacific Island countries

COUNTRY	UNMET NEED
Cook Islands	20 ¹
Fiji	43-57 ²
Kiribati	28 ⁵
Nauru	23.5 ⁵
Papua New Guinea	45.9 ⁶
RMI	5.9 ⁵
Samoa	20-53 ³
Solomon Islands	11.1 ⁵
Tuvalu	24.2 ⁵
Vanuatu	24 ⁴

Sources:

¹ Reproductive Health Survey, 2003. Ministry of Health, Cook Islands

² Fertility and Reproductive Health Survey, Fiji, 1995, range depicts age and ethnic grouping

³ Fertility and Reproductive Health Survey, Samoa, 1995, range depicts age grouping

⁴ House, KAP Study in Vanuatu, 1999

⁵ Papua New Guinea, RMI, Solomon, Nauru, Tuvalu, Kiribati DHS National Reports 2007–2009 (among currently married women)

⁶ PNG DHS National report 1996

Using TFRs, age specific fertility rates and CPRs as proxy indicators, high unmet need for contraception appears prevalent in most PICs (Table 2). Teenage fertility rates may serve as a proxy for unmet need in that age group. High teenage fertility rates in RMI, Vanuatu, Kiribati, Solomon Islands and FSM concomitantly with high TFRs and relatively low CPRs suggest that unmet need in these countries may indeed be very high.

Methodology

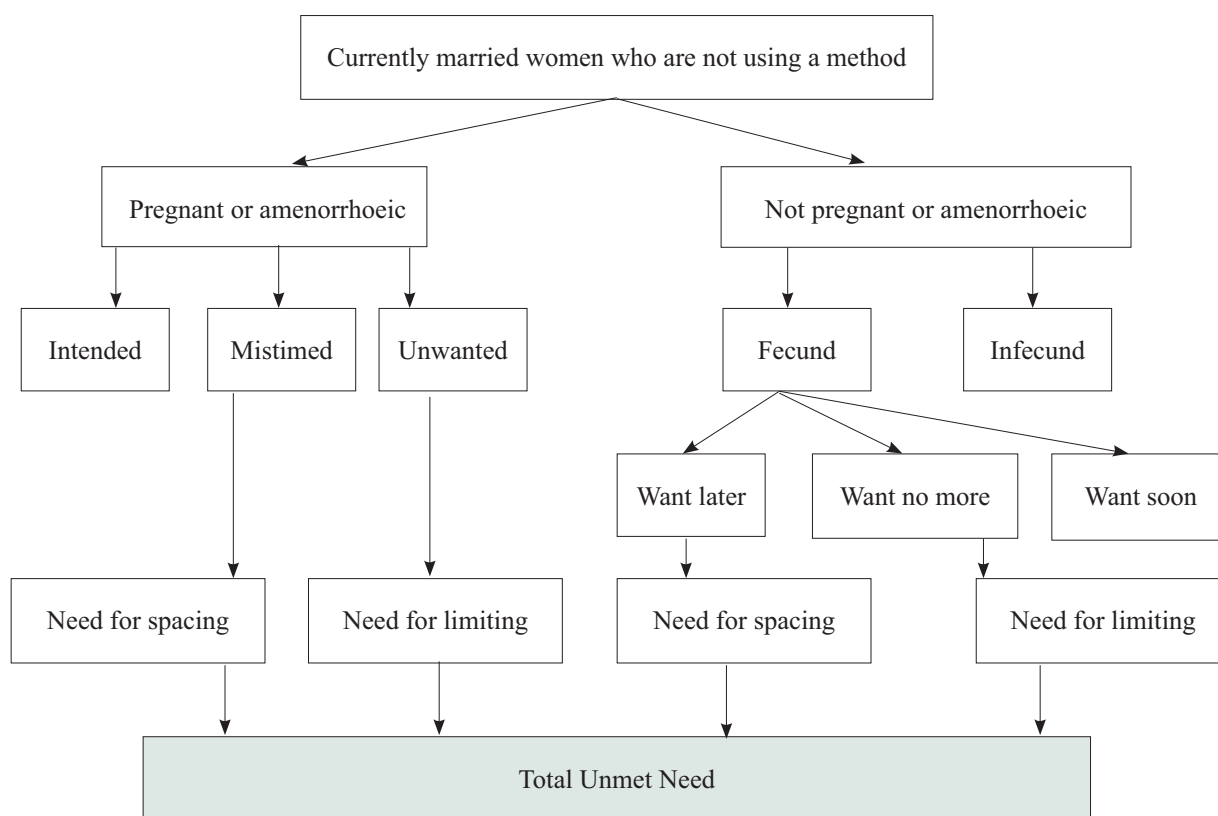
The DHS were undertaken in the Solomon Islands in 2006-7, in RMI in 2007 and in Nauru in 2007. This paper is based on the analyses of the three DHS databases.

Initial descriptive statistical analysis was undertaken of the dependent (Contraceptive Use, Unmet Need for Family Planning) and the independent variables (socioeconomic and demographic characteristics). Analytic statistics calculated for associations with modern contraceptive use (binary) among all women used Chi square statistical analyses.

Logistics Regression Models (Odds Ratios & 95% Confidence Intervals (CI)) were used to identify the influence of covariates on modern contraceptive use. Variables included in the analyses were age, educational attainment, wealth quintiles, rural/urban, religion (initial all, then catholic versus others, age at first marriage, total children ever born, visit to health centre, visit by family planning worker.

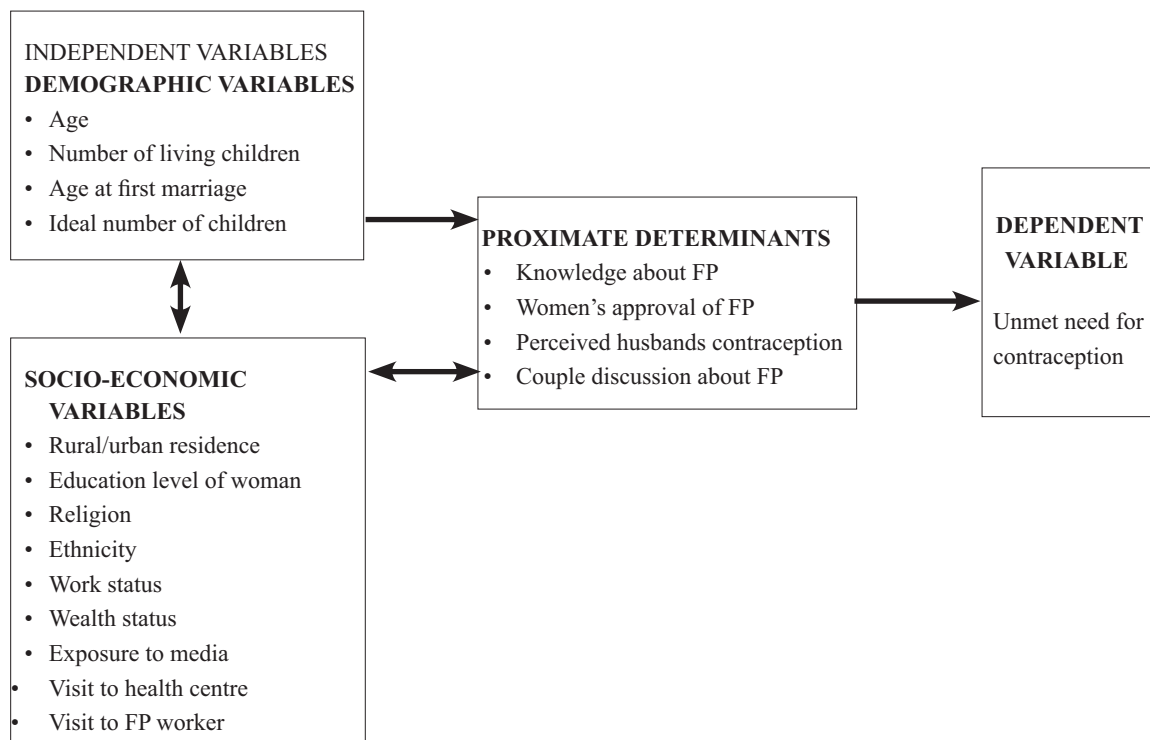
For the Unmet Need for Family Planning analyses, the major categories constructed to define unmet need are indicated in Figure 4.

Figure 4 Major categories used to define Unmet Need for Family Planning



Source: Khan, et al. Macro International Inc, 2008

It is noteworthy that infecund women and those who wanted a child soon are not considered to have unmet need and thus are excluded from the analysis. For the descriptive and analytic analyses, the variables used are included in Figure 5.

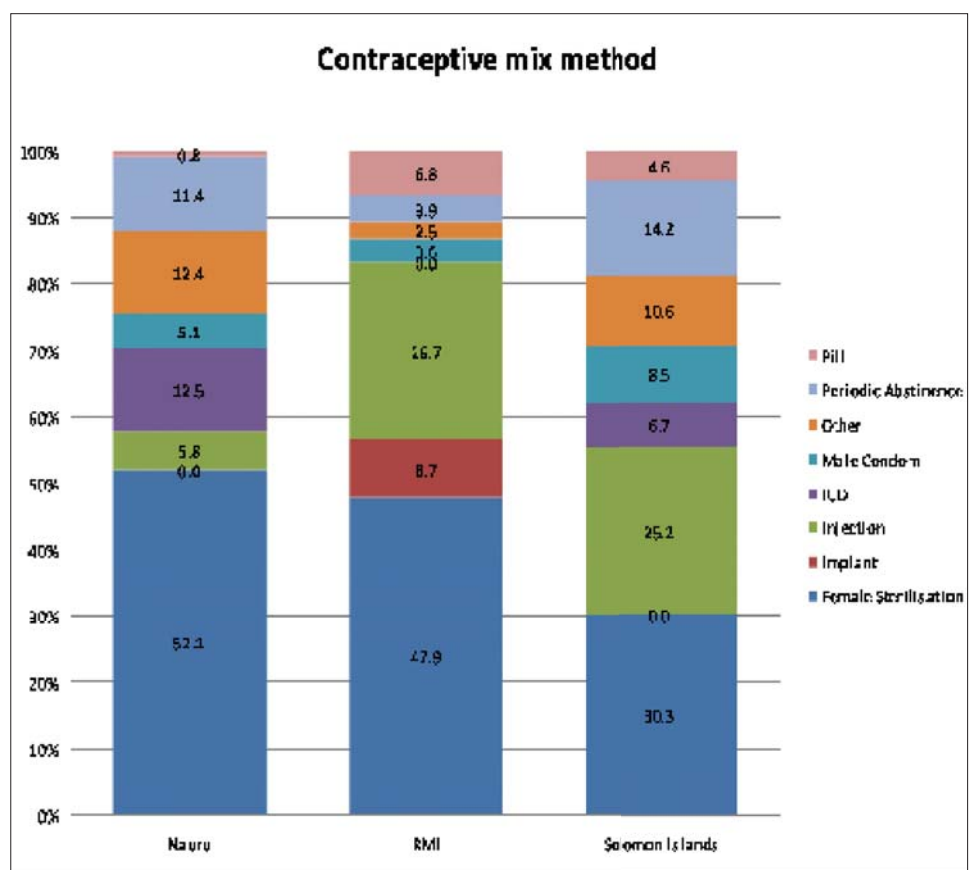
Figure 5 Conceptual framework for Unmet Needs Analysis Results

Adapted from Korra 2002

Results

Descriptive analysis of contraceptive use in three selected PICs

The rate of contraceptive use among all women varied between the three countries studied. The rate of current use of all contraceptive methods among currently married women (contraceptive prevalence) was 35 percent in Solomon Islands, 36 percent in Nauru and 45 percent in RMI. The percentage of currently married women using a modern contraceptive method was 27 percent in the Solomon Islands, 25 percent in Nauru and 42 percent in RMI, respectively. Rates of contraceptive use were lowest among sexually active unmarried women: 25 percent for any method in Solomon Islands, 24 percent in Nauru and 27 percent in RMI.

Figure 6 Contraceptive method mix for Nauru, RMI, Solomon Islands

The type of contraceptives used in the three countries studied ranged from permanent methods such as male and female sterilisation, to temporary methods such as injectables, pills, condoms and implants. In RMI and Solomon Islands, female sterilisation and injectables comprised the highest percentage of contraceptives used while in Nauru female sterilisation, pills and intrauterine devices (IUDs) had the highest percentage of users. A high percentage of periodic abstinence and traditional methods suggest there is need to shift to effective modern contraception from less reliable methods.

Modern contraceptive use varied by demographic factors and socioeconomic variables. As revealed in the table below, lowest prevalence was observed in women in the youngest age category, with the lowest educational attainment (except Solomon Islands), in the lowest wealth quintiles (except RMI) and those that were never married. Those with the highest total children ever born or the highest living children had the highest prevalence rate. Those who were married less than 25 years had the highest contraceptive prevalence rate. Women who were employed had a higher prevalence rate than those that were unemployed (except Nauru). As expected, those who visited the health centres or were visited by Family Planning workers had the higher contraceptive prevalence rate compared to those who did not.

Analysis by religion revealed interesting patterns in each country. Religion was not included in the RMI analysis. As predicted, Roman Catholic contraceptive prevalence rates were overall lowest, compared to other religious groups in both Solomon Islands and Nauru.

Analysis by location revealed in RMI and Solomon Islands that those living in urban areas had lower modern contraceptive prevalence rates compared to those living in rural areas. Nauru DHS did not report data by locations.

Analysis by ethnicity revealed that those with the lowest prevalence rates in Nauru were Part Nauruans and in Solomon Islands were Melanesians.

Table 4 Percentage of contraceptive use among women of reproductive age by selected demographic and socioeconomic factors

Selected Variables	COUNTRIES		
	Nauru	RMI	Solomon Is
Age Group			
15-19	23.5	10.1	3.7
20-24	13.5	25.7	10.8
25-29	27.7	40.0	14.2
30-34	31.7	48.4	22.1
35-39	46.6	58.7	26.5
40-44	49.1	57.2	31.8
45-49	41.4	52.1	28.4
Women's Educational Attainment			
No formal education	0.0	20.0	19.5
Primary	0.0	39.4	18.7
Secondary	38.4	37.0	12.0
Post-Secondary	24.5	35.0	19.5
Wealth Quintile			
Poorest	32.5	38.9	16.1
Poor	32.6	40.9	16.0
Middle	35.4	39.1	19.8
Richer	46.4	29.2	19.1
Richest	36.0	35.8	14.8
Total Children Ever Born			
0	-	5.7	3.5
1 or 2	14.9	31.3	14.6
3 or 4	32.3	55.4	24.9
5 or more	44.8	60.7	18.1
Marital Status			
Never married	6.8	13.8	4.3
Currently married	38.9	44.9	22.9
Formerly married	31.2	41.9	12.5
Number of Living Children			
0	0.0	5.7	3.5
1 or 2	15.0	33.3	14.9
3 or 4	35.1	54.8	25.4
5 or more	48.1	61.6	17.5
Age at First Marriage			
<20	36.8	47.5	24.2
20-25	41.7	41.2	21.1
>25	33.7	33.2	15.9
Employment Status			
Employed	36.1	45.9	21.0
Not employed	37.1	33.5	14.3
Visit to Health Clinic			
Yes	42.4	44.4	21.9
No	29.8	32.8	13.2
Visit by Family Planning Worker			
Yes	36.0	43.3	26.4
No	36.9	35.4	15.6

Table 5 Patterns of contraceptive use by religion in Solomon Islands and Nauru

NAURU	
Religion	Modern contraceptive use (%)
Nauru Congregational	34.4
Roman Catholic	28.1
Nauru Independence	62.3
Assemblies of God	57.0
Other	38.2
No religion	0.0
SOLOMON ISLANDS	
Religion	Modern contraceptive use (%)
Anglican	16.1
Roman Catholic	9.4
United Church	20.6
South Seas Evangelical	19.3
Seventh Day Adventist	20.1
Other	20.2

Table 6 Percentage modern contraceptive use by location within countries

Location	Solomon Islands	Republic of Marshall Islands
Urban	11.2	30.9
Rural	16.7	40.0

Table 7 Percentage modern contraceptive use by ethnicity within countries

SOLOMON ISLANDS	
Ethnicity	Modern Contraceptive Use (%)
Melanesian	16.5
Polynesian	19.4
Micronesian	16.7
Other	50.0
NAURU	
Ethnicity	Modern Contraceptive Use (%)
Nauruan	37.1
P/Nauruan	18.8
I-Kiribati	54.3
Other	38.5
Total	36.5

Multivariate analysis of contraceptive use in three selected PICs

Results of multivariate analysis undertaken to determine associations between contraceptive prevalence and selected demographic and socioeconomic covariates are presented in Table 8.

Analyses using crude and adjusted odds ratios with 95% confidence intervals revealed statistically significant differences in all three PICs between younger age groups and the oldest age group. In RMI and Solomon Islands, women in the youngest group had four times lower odds of using contraceptives compared to their oldest counterparts. A clear gradient exists from youngest to oldest, with women <20 years having 0.2 times odds of using contraception than women aged 45–49 years, while women in the 40–45 year age group had 1.5 times odds.

As expected, significant differences were also observed between marital status groups and between groups reporting age at first birth with apparently lowest use being among groups who were single and those who married later.

In Solomon Islands, those who were married had a statistically significantly higher odds of using contraceptives than those who were not. Similarly, in Nauru and Solomon Islands, Catholic women had statistically significantly lower odds of contraceptive use than women of other religions, even when the effects of other covariates were controlled.

In RMI, statistically significant differences were observed for locality with higher odds of contraceptive use among rural dwellers than urban dwellers, even when controlling for other covariates. In Solomon Islands the higher odds of use among rural dwellers did not remain when other variables were controlled for, suggesting substantial confounding may have been present. Further analysis is required to determine the exact nature of confounding and effect modification.

In the Solomon Islands, statistically significantly higher rates of contraceptive prevalence were observed for those that were employed compared to those that were unemployed. This association remained when other variables were controlled for. In Solomon Islands, 12.4 percent of girls in the lowest wealth quintile have had a child by the age of nineteen, whereas only 6.5 percent of girls in the highest quintile have had a child by the age of nineteen (data not shown). These patterns reveal the need for further focused family planning programming among young poor women.

For all three countries, it was evident that those who visited health centres or were visited by Family Planning

Table 8 Logistic regression model for contraceptive use by selected socioeconomic and demographic variables

Variable	Nauru		Republic of the Marshall Islands				Solomon Islands						
	Unadj OR	95% CI	Adj OR	95% CI	Unadj OR	95% CI	Adj OR	95% CI	Unadj OR	95% CI			
Age Groups													
15-19	0.435	0.14, 1.37	0.37		0.11, 1.21	0.10	0.06, 0.12	0.25	0.13, 0.48	0.1	0.06, 0.16	0.21	0.10, 0.45
20-24	0.220	0.13, 0.38	0.17		0.10, 0.29	0.32	0.21, 0.49	0.31	0.19, 0.30	0.30	0.21, 0.44	0.30	0.19, 0.46
25-29	0.543	0.37, 0.80	0.48		0.32, 0.23	0.61	0.40, 0.94	0.57	0.36, 0.91	0.42	0.29, 0.59	0.36	0.24, 0.53
30-34	0.655	0.47, 0.92	0.56		0.39, 0.80	0.86	0.55, 1.35	0.83	0.51, 1.33	0.71	0.51, 1.01	0.63	0.43, 0.91
35-39	1.23	0.86, 1.76	1.09		0.74, 1.60	1.31	0.83, 2.06	1.24	0.84, 2.20	0.91	0.64, 1.29	0.79	0.54, 1.14
40-44	1.37	0.97, 1.92	1.39		0.92, 2.01	1.23	0.76, 1.99	1.59	1.03, 2.44	1.17	0.81, 1.70	1.04	0.7, 1.54
45-49	-	-				-	-	-	-	-	-		
Highest Maternal Education Level													
None						0.47	0.05, 4.26	0.69	0.064, 7.45	1.0	0.66, 1.54	0.82	0.49, 1.38
Primary	0		0			1.21	0.83, 1.76	1.43	0.88, 2.34	0.95	0.65, 1.38	0.84	0.53, 1.32
Secondary	1.92	1.21, 3.06	1.93		1.17, 3.2	1.09	0.77, 1.54	1.28	0.83, 1.98	0.56	0.38, 0.84	0.89	0.56, 1.42
Postsecondary	-	-				-	-	-	-	-	-	-	-
Wealth Quintile													
1	0.86	0.56, 1.23	0.87		0.58, 1.3	1.14	0.83, 1.57	0.59	0.34, 1.05	1.11	0.85, 1.44	1.00	0.68, 1.48
2	0.86	0.60, 1.23	0.93		0.63, 1.38	1.24	0.91, 1.73	0.70	0.42, 1.18	1.09	0.83, 1.44	0.87	0.59, 1.29
3	0.97	0.68, 1.39	0.90		0.61, 1.34	1.15	0.80, 1.66	1.29	0.83, 2.03	1.42	1.10, 1.83	1.15	0.80, 1.66
4	1.54	1.08, 2.18	1.47		1, 2.16	0.74	0.51, 1.08	0.73	0.46, 1.14	1.36	1.07, 1.73	1.15	0.83, 1.59
5	-	-				-	-			-	-	-	-
Religion													
R/Catholic	0.55	0.44, 0.70								0.48	0.37, 0.64	0.33	0.24, 0.45
Others													
Location													
Rural						1.39	1.13, 1.69	1.59	1.03, 2.45	1.59	1.33, 1.90	1.08	0.78, 1.41
Urban						-	-			-	-		

workers had statistically significantly higher contraceptive prevalence rates compared to those that did not. These associations were still evident when the effects of other covariates were controlled.

Contraceptive prevalence rates are not ideal estimates for determining success of family planning programmes as better estimates such as percent of demand satisfied or unmet need provide the element of desire for contraception. However, from this analysis, groups with less modern contraceptive use can be identified and factors associated with low use highlighted. As such, inequity to services may be inferred.

Lowest contraceptive use was observed among younger age groups, women who are unemployed, Catholic, urban dwellers and those not visiting the health centre or being visited by a family planning worker. The results of the wealth quintile analysis did not reveal significant differences across groups but further subgroup analysis is needed to identify potential effect modification. Similarly, while the results on education were not significant, clear trends, albeit not linear, are evident suggesting those with no education have lowest contraceptive use.

Unmet need for family planning: identifying inequities

Differentials in unmet need for family planning among currently married women by demographic and other characteristics using the Solomon Islands DHS 2007-2008 is illustrated in Table 9.

Table 9 Percent of currently married women 15 with unmet need by demographic or socioeconomic variables

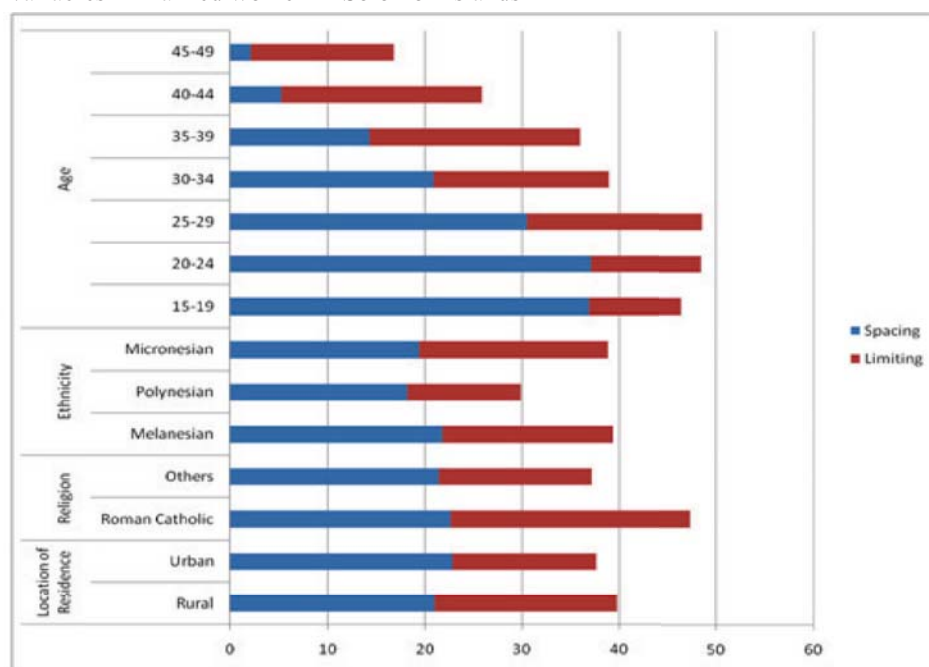
Characteristic	Percent with unmet need			Characteristic	Percent with unmet need		
	For Spacing	For Limiting	Total		For Spacing	For Limiting	Total
Age				Total Children Born			
15-19	36.9	9.5	46.4	0	22.9	2.9	25.8
20-24	37.1	11.4	48.5	1-2	34.2	11.1	45.3
25-29	30.5	18.1	48.6	3-4	19.4	20.3	39.7
30-34	20.9	18.0	38.9	5+	11.0	25.6	36.6
35-39	14.3	21.7	36.0	Number of Living Children			
40-44	5.2	20.7	25.9	0	22.4	3.3	25.7
45-49	2.1	14.7	16.8	1-2	34.0	11.1	45.1
Educational Attainment				3-4	19.3	20.4	39.7
None	22.3	20.4	42.7	5+	10.2	26.3	36.5
Primary	21.2	17.4	38.6	Age at First Marriage			
Secondary	23.6	17.1	40.7	<20 years old	21.3	19.7	41.0
Post-secondary	16.1	11.3	27.4	20-25 years old	22.2	15.0	37.2
Location of Residence				>25 years old	21.2	14.0	35.2
Rural	21.0	18.8	39.8	Ideal Number of Children			
Urban	22.8	14.8	37.6	0-2	26.7	15.8	42.5
Religion				3-4	21.1	16.5	37.6
Roman Catholic	22.6	24.8	47.4	5+	18.4	20.8	39.2
Others	21.4	15.8	37.2	Visit to Health Clinic			
Employment				Yes	20.4	18.0	38.4
Employed	17.1	16.9	34.0	No	22.8	17.0	39.8
Unemployed	24.2	17.7	41.9	Visit by Family Planning Worker			
Household Wealth				Yes	18.5	12.3	30.8
Lowest quintile	20.3	24.8	45.1	No	22.1	18.1	40.2
Second quintile	24.5	18.4	42.9	Ethnicity			
Middle quintile	24.1	15.6	39.7	Melanesian	21.8	17.6	39.4
Fourth quintile	19.9	14.7	34.6	Polynesian	18.2	11.7	29.9
Fifth quintile	20.9	20.9	41.8	Micronesian	19.4	19.4	38.8
Total	21.6	17.4	39.0				

For most variables, results from the analysis of unmet need in the Solomon Islands parallel the findings of the analysis on contraceptive prevalence, identifying similar population groups in which unmet need for family planning is highest.

As the potential to overestimate demand is possible when using unmet need, some caution should be exercised when interpreting these results. Furthermore, limitations that exist in this analysis of unmet need relate to restriction to married women and the relatively small numbers in some of the subgroups, especially younger women. In spite of these limitations, some patterns emerge related to disadvantaged population groups in which unmet need is high.

From Table 9 and Figure 7a, it is evident that women in the youngest age groups have highest unmet need for spacing and highest total unmet need. Melanesian women have higher unmet need for spacing compared to the other ethnic groups and Roman Catholic women have very high unmet need. While women in urban areas have higher total unmet need for contraception than women in rural areas, women in rural areas have higher unmet need for limiting.

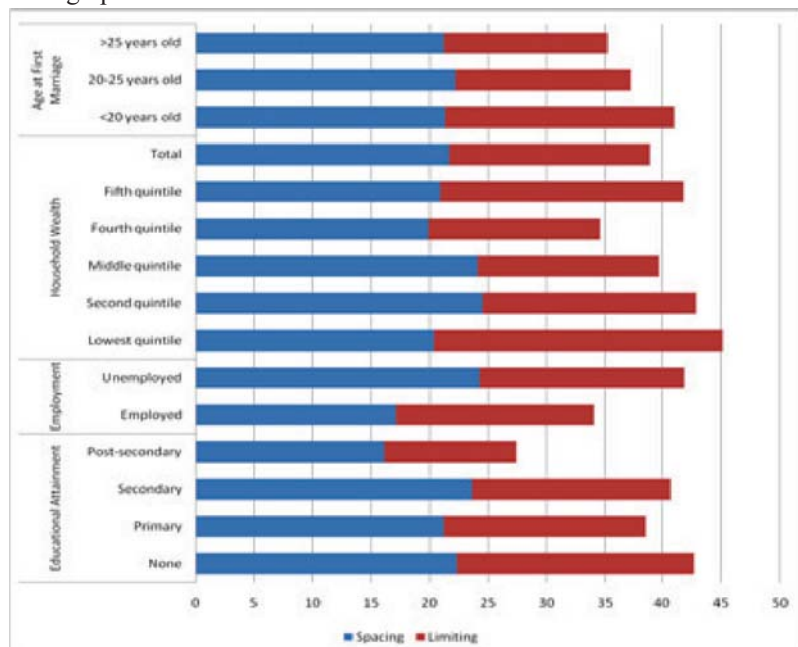
Figure 7a Unmet need for spacing and limiting by socioeconomic and demographic variables in married women in Solomon Islands



Similarly, those women whose age at first marriage was less than 20 years reported higher unmet need for contraception. Women who were in the lowest wealth quintile, unemployed women and those women with no education also had higher total unmet need compared to other women.

Analysis by wealth quintile showed highest levels of unmet need for spacing and limiting among those in the lowest quintiles but a clear gradient is less evident with the fifth quintile also having high unmet need. Similarly, while the results on education were not significant, clear trends are evident suggesting those with no education had highest total unmet need and highest unmet need for limiting.

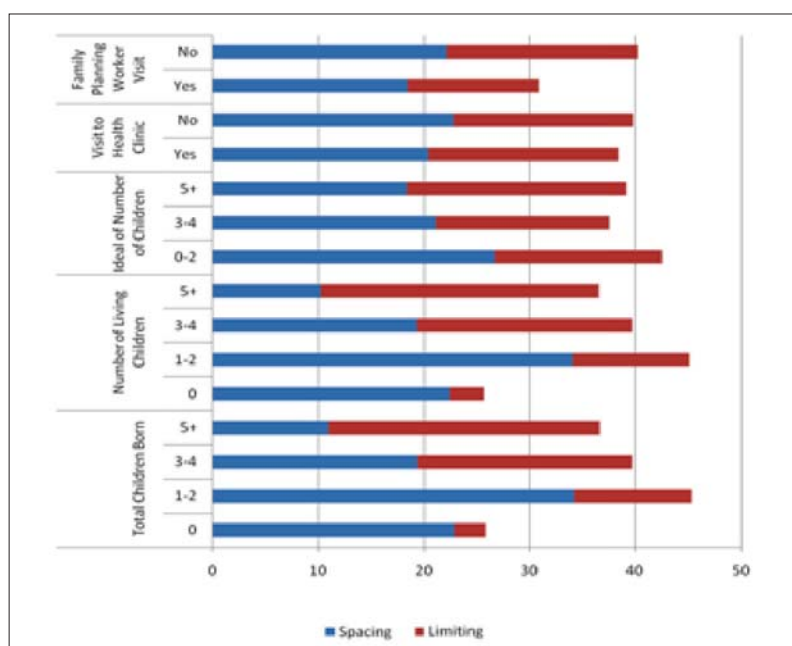
Figure 7b Unmet need for spacing and limiting by socioeconomic and demographic variables in married women in Solomon Islands



These results suggest that certain subgroups of the population have high unmet need for family planning and focused and targeted family programmes are needed to address it. Further subgroup analysis is also needed.

Furthermore, those not visiting the health centre and those not visited by family planning workers had higher unmet need for spacing and total unmet need for contraception. Less clear patterns were observed when analysis was done by ideal number of children, number of living children and total number of children.

Figure 7c Unmet need for spacing and limiting by socioeconomic variables in married women in Solomon Islands



Reasons for current non-use of contraception

The reasons for current nonuse among currently married women who are not using contraception and who do not intend to use it in the future in Solomon Islands were reported to be primarily fear of side effects and fertility related issues, such as subfecundity, rather than lack of access to services or cost. This is not unlike other analyses of DHSs reported in the literature (Casterline & Sinding 2000). Interestingly, religious opposition was cited more often than husband's opposition as reasons for non use among currently married women not using contraception. Opposition to use and lack of knowledge about method and source draw attention to the informational barriers to contraceptive use that exist in Solomon Islands, while the high percentage with fear of side-effects reveals the need for education and effective counselling about family planning methods. Given that this analysis was only among married women, further analysis is needed among unmarried, young women to determine their reasons for nonuse.

Table 10 Percent distribution of currently married women aged 15–49 who are not using contraception and who do not intend to use it in the future by main reason for not intending to use, Solomon Islands, 2007

Reason		Frequency	Percent
Fertility related	Infrequent sex	16	1.8
	Menopausal or had a hysterectomy	12	1.4
	Subfecund or infecund	152	17.2
	Wants more children	25	2.8
Opposition to use	Respondent opposed	63	7.1
	Husband opposed	25	2.8
	Others opposed	5	0.6
	Religious prohibition	41	4.6
Lack of knowledge	Knows no method	37	4.2
	Knows no source	27	3.1
Method related	Health concerns	60	6.8
	Fear of side effects	324	36.7
	Lack of access	5	0.6
	Costs too much	4	0.5
	Inconvenient to use	2	0.2
	Interferes with body	25	2.8
	Other	28	3.2
Don't know		33	3.7
Total		884	100.0

Source: Solomon Islands DHS 2007

Termination of pregnancies

Terminations of pregnancies (TOP) also signify an unmet need for contraception. It was observed that Nauru had the highest rate of TOP (33 percent) while Solomon Islands and RMI the percentage prevalence were close to 6 and 7, respectively. Given that this level of TOP is unlikely in Nauru, it is worth conducting further analysis to review the validity of this data.

Table 11 Percentage prevalence of terminations of pregnancies

Termination of Pregnancy	Solomon Islands	RMI	Nauru
Yes	6.2 (3578)	7.5 (122)	32.8 (452)
No	93.8 (238)	92.5 (1503)	67.2 (925)

While among those that had had a TOP, the percentage of modern contraceptive use was low, it was still higher than among women who had not had a TOP. Thus, by extension, unmet need for contraception can manifest in termination of pregnancy. Subgroup analysis was not possible because of small numbers.

Table 12 Percentage of modern contraceptive use among those who have had a termination of pregnancy

Termination of Pregnancy	Solomon Islands	RMI	Nauru
Yes	22.3	38.5	45.3
No	16.3	37.3	32.2
	16.6	37.4	36.5
	SS p=0.019	NS p=0.846	SS p<0.001

In summary, the levels of unmet need for spacing and for limiting among categories are extremely high suggesting a need for future strategies to strengthen family planning information and counselling programmes targeting disadvantaged and underserved groups. In Solomon Islands, disadvantaged groups with higher unmet need for spacing include the youngest age group, uneducated women, women in lower wealth quintiles, in Melanesian women, Roman Catholics, those living in urban areas, unemployed and those not visiting a health clinic and not visited by a family planning worker.

While the results of this analysis of DHSs for three countries cannot be generalised to the whole Pacific, they do illustrate certain common groups, especially young people, requiring further attention for family planning programmes. Further analysis is required among subgroups and among unmarried women. Analyses of DHSs in other Pacific countries will soon be possible.

Repositioning family planning: policy and programming implications

Paradigm shift in relevant policies

Through repositioning Family Planning the achievement of fundamental reproductive rights can become recognised as an integral development strategy for poverty reduction in the Pacific. Strengthened rights-based family planning programmes, through identifying unmet need among underserved groups, have the potential to contribute to more rapid fertility decline and earlier window of opportunity, reducing poverty in Pacific Island communities. Family Planning can be an instrument of economic growth above and beyond its contribution to reproductive health (McNicol 2006, Bloom et al 2002, Bernstein 2002).

In 2008, Pacific Ministers of Health developed and endorsed the “Pacific Policy Framework for Achieving Universal Access to Reproductive Health Services and Commodities”. The incorporation of reproductive health, including family planning, in national and sub-national development and sectoral plans has been achieved in many PICs, but the inclusion of sexual health and family planning initiatives especially targeting disadvantaged groups in MDG strategies is less evident. Nearly all Pacific Island Countries (Cook Islands, Fiji, FSM, Nauru, Kiribati, RMI, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu) have developed or are developing national reproductive health policies and strategies in which voluntary and rights-based family planning is a core component. In some of these policies, addressing unmet need among disadvantaged groups is evident.

Prioritization of investment in family planning and other sexual and reproductive health services should emphasize pro-poor policies and programmes that will reduce unmet need and facilitate access to quality information and family planning services. While most PICs are developing national reproductive health policies and strategies, there is need to especially consider improving access to family planning and other sexual and reproductive health information and services for disadvantaged socioeconomic and sociocultural groups. Investing in functional health systems for equitable delivery of basic health services through revitalisation of primary health care has been endorsed in the Madang Commitment by Ministers of Health in 2009. Improved private-public partnerships and strategies that meet the needs of disadvantaged groups, especially the poor and the young can be developed through their more active involvement in the design of policy formulation and operations of programmes. In each PIC, there is need to assess the extent to which family planning and sexual and reproductive health especially for disadvantaged groups have been considered a priority within health system strengthening efforts, and identify and address financial, legal, cultural and other barriers to access and use. Development of pro-poor financing strategies to reduce financial barriers and promotion of culturally acceptable and religiously targeted strategies may have a greater impact than overall programme strengthening.

To encourage Pacific leaders to embrace and invigorate voluntary family planning programmes especially for the vulnerable groups, innovative strategies are needed to ensure family planning is given highest political support. Strategies could include advocacy activities (media campaigns, seminars with parliamentarians and technical discussions using information generated analyses from DHS surveys) aimed at increasing understanding of the linkages between poverty, population and family planning. Understanding how variations in contraceptive use by socioeconomic, demographic and sociocultural factors can be masked by national averages should allow decision-makers to target resources for different sociocultural and socioeconomic groups. Identification and support of national champions or political leaders for advocating for family planning is needed in all countries. Such strategies could result in increased national and international support for sustainable family planning services. Focus should be on reaching disadvantaged populations and women with highest unmet need.

Education and women's empowerment policies also have significant impact on achievement of desired family size. Addressing lack of women's empowerment is central to achieving sexual and reproductive health. More educated parents and empowered women realize the higher opportunity costs with bigger families and are able to make more informed decisions related to contraception so as to be able to invest more in educating their children and providing them more opportunities for economic advancement. Active participation of males in this effort is essential within the Pacific cultural context. Thus, a multi-sectoral policy that pulls together health, education and labour is needed for effective fertility reduction.

Programming innovations

In the Pacific, family planning programmes and strategies should be strengthened to address universal access to and use of contraceptive services and information by targeting disadvantaged groups. More innovative strategies are needed to ensure that disadvantaged women and men, particularly young women, less educated and unemployed women, and women living in poor peri-urban, rural areas and outer islands, are being reached with information focusing on creating awareness about high risk behaviour and culturally determined behaviours that act as barriers to the use of services. Effective counselling services for these sub-groups are essential to overcome method-related reasons for non-use such as fear of side-effects and health concerns. Without the focus on the disadvantaged populations, it is possible to attain higher national prevalence rates as a result of increased use among the advantaged and not necessarily among the disadvantaged or underserved.

Designing programmes to make family planning and reproductive health services available and close to where disadvantaged groups live and work could be undertaken through identifying and providing integrated essential services through coordinated public sector, NGO and community based groups. In implementing programmatic changes, there is a special need to promote access for all women and men, especially young people, those living in peri-urban, rural areas and outer islands, and disadvantaged or marginalized groups, to a full range of sexual and reproductive health information, family planning services and commodities.

Current family planning programmes have been recently been invigorated in FSM, Solomon Islands, Vanuatu and Tonga through introducing updated family planning clinical guidelines sub-nationally. This experience could be adopted in other PICs. Improvements in family planning programming should address barriers to use such as overcoming fear of side effects, through facilitating informed decision-making and increasing opportunities

to obtain effective contraceptive counselling services and through stronger maternal health – family planning integration and HIV-family planning linkages. Follow-up of defaulters is necessary, especially to address method-related concerns or misinformation.

Ensuring a secure, timely and reliable supply of contraceptives for all persons who wish to use contraception is a strategy that has received substantial technical and funding support over the past four-six years in many PICs, especially from governments, UNFPA, AusAID, NZAid, and IPPF. Strategic planning should be further refined to ensure sustainable delivery of contraceptives to all sectors of society, including most at risk populations and disadvantaged groups.

In many countries, contraceptive choice has broadened from pills, condoms and injectables to include emergency contraception pills, implants and female condoms. Tubal ligations are undertaken in many countries in urban areas and vasectomies are performed in a few countries, although for the latter the demand is low. Analysis of the various methods used by disadvantaged groups may suggest a need to shift to more effective methods of modern contraception. Further studies are needed to understand the reasons for high unmet need and the reluctance to use certain contraceptive methods.

Renewing support from government institutions, development partners, NGOs, professional associations and private sector to improve delivery of reproductive health commodities and investment for sustainable voluntary family planning services requires coordination and collaboration of all partners to ensure countries are able to define and reach their stated goals in this area. Strategies to promote condom programming with NGOs have included the supply of Pacific repackaged condoms with lubricant sachets, the development of a rapid needs assessment toolkit for condom programming and promoting community based distributors and peer educators through training and supply of commodities. Improved outreach for condom programming, particularly for most at risk young people, have involved parents and religious and cultural leaders, given their status as gatekeepers in many Pacific societies, as well as the young people themselves.

To facilitate community awareness and behavioural change, communication strategies and educational materials for contraceptive methods have been developed for national adaptation to the local level and languages. While PICs have undertaken media campaigns, community education and youth workshops to promote responsible sexual behaviour among young people and to increase their awareness of availability of contraceptives for prevention of unintended pregnancies, programming should also target most at risk young people. Targeting messages to specific disadvantaged groups is essential for reaching them. A network of sustainable NGOs for behavioural change communication, provision of IEC materials and contraceptives provision for targeted groups, particularly including young people, vulnerable groups and males is needed in most countries. Social marketing techniques should be explored in different communities.

Strategies aimed at integration of sexual and reproductive health/family planning/HIV/STI services to ensure that all points of entry are maximised should be embraced. Family Planning and HIV services integration would dramatically increase HIV assessments, risk discussions and dual protection thereby leading to an improvement in access to information, STI prevention and appropriate contraception. Strategies for strengthening national institutional capacity to identify and implement linkages for sexual and reproductive health and HIV are currently being developed to better address this in Vanuatu and Chuuk, FSM. These include pre- and in-service training in family planning and HIV counseling and testing.

Furthermore, it is important to engage men and boys to take action within their families and communities to promote gender and other inequalities and to bring about social change to improve access to and use of family planning for those in need. Specific attention should be provided to males to increase responsible male involvement in reproductive health decision making. Focused programming with males in the workplace and in the community, not merely providing them reproductive health services but increasing their level of knowledge and sense of responsibility about their role in reproductive health, including family planning, should be supported and upscaled. Programmes targeting fathers and potential fathers are needed. Through strengthening and expanding national adolescent reproductive health programmes, male youth can be better reached.

Similarly, for adolescent females, there is a need for strengthening current programmes aimed at empowering girls and linking them to appropriate reproductive health information and counselling services. Service, cultural, legal and financial barriers to contraceptives provision in sexually active adolescents need to be removed so as to enable them to achieve their educational and life aspirations while taking into account their reproductive

needs. Specific family planning methods may need to be promoted in countries, especially where health care providers and pharmacists themselves are the barriers to accessing appropriate contraception for sexually active, young women.

As larger investments are made in education and health, these disadvantaged groups of people may become more aware of the gains of a smaller family size and girls may become more empowered in reproductive health decision making. The benefits of family planning may then be fully realized and the chance for interrupting the cycle of poverty with its economic consequences may be within reach.

Assessment of trends in inequity in access and use of contraceptive services and unmet need for family planning should be undertaken through analysis of the health information systems, DHSs and other socio-behavioural surveys. There is need to develop national capacity to maintain and strengthen routine family planning data systems to monitor trends and evaluate programme efforts to reduce inequities in access and inequalities in use of reproductive health services. Such analysis is also important because women who are disadvantaged in preventing unintended pregnancies are least likely to utilise skilled birth attendants and most likely to suffer from maternal morbidity and mortality.

Conclusion

This paper has illustrated the variations in contraceptive use and identified the groups of women with high unmet need for contraception in the countries studied. Women with high unmet need for contraception in Solomon Islands include young women, poor i.e. lowest wealth quintile, rural women, unemployed women, certain religious groups, women with lower educational attainment and those not visiting health centres or visited by health or family planning workers.

The low use of modern contraceptives in all three countries, particularly among some groups, has revealed the need for a more innovative approach to promoting sexual and reproductive health, including family planning, programmes – one that is based on the premise that all women, regardless of education, wealth, age, religion, employment status or residence, have the right to high quality family planning information and counseling services. A paradigm shift in policy and programming innovations to address access and utilization barriers is needed in all countries. Such an approach should be based on most recent evidence to ensure that groups identified and provided services are properly monitored for follow-up services.

Identifying variations in contraceptive use has further strengthened the need to reposition family planning in some Pacific Island countries. Key indicators of family planning success have shown little improvement to the extent expected in recent years. The “unmet need” for family planning is high; contraceptive prevalence rates remain relatively low in several countries and may have stalled or decreased in others; women in several Pacific countries are still having more than four children on average; and teenage fertility rates remain persistently high in several countries.

The delivery of effective voluntary family planning services should be considered a priority within the full sexual and reproductive health agenda but also within the context of broader socioeconomic benefits. While repositioning family planning requires ensuring universal access to reproductive health information and services, such revitalization of family planning has the potential to effect poverty reduction, especially in the Pacific Island Countries in which poverty is only recently being recognized as a national issue and where basic individual human rights are acknowledged within the local socio-cultural context as fundamental for societal progress. Taking advantage of the focus on ICPD @15 this year, by engaging political leaders in this effort, utilising evidence-based information through timely and regular demographic/reproductive health surveys, diversifying contraceptive delivery systems, improving reproductive health commodity supplies and embracing pro-poor, youth and male reproductive health programmes, the right of all individuals to effective and timely availability of quality contraceptive services and information can be fully realised in the Pacific.

Further improvements in education, gender equity and equality as well as women’s empowerment should go hand in hand with improved sexual and reproductive health services and will contribute to a earlier transition to enable countries to take advantage of the demographic bonus that can occur as countries approach the window of opportunity. Repositioning family planning advocates for a multi-sectoral approach to ensure family planning becomes considered as an essential national development strategy for poverty reduction, a necessary health strategy aimed at protecting the health and well being of women and their families, and a strategy for the realization of basic human rights in all societies in the Pacific.

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Family Planning in the Pacific: improving universal access to reproductive health

Salesi Katoanga

Current world statistics on reproductive health (RH) indicate that more than 500,000 mothers die every year from complications of pregnancy and childbirth. This represents one maternal death every minute, a statistic that has been quoted globally for over a decade. In fact, the estimate of 536,000 maternal deaths in 2005 shows that, despite the collective effort of the international community, we are still unable to reduce the number of maternal deaths to below 500,000. Regrettably, 99% of these deaths occur in developing countries, which translates to about 1,450 maternal deaths a day as opposed to 15 a day in developed countries. Both rates are unacceptable by any standard but the disparity speaks volumes to the underlying conditions in these different settings and presents a monumental challenge for health policy-makers and leaders in developing countries. Pregnancies and motherhood are natural and normally healthy phenomena, a time of optimistic anticipation of the boundless opportunities ahead. Sadly, in developing countries, this optimism is often shrouded in fear and uncertainty, with the risk of disability and even death arising from the reality that surrounds them.

The leading causes of maternal death in developing countries are basically the same: haemorrhage, obstructed/prolonged labour, eclampsia or related hypertensive disorders, and sepsis (infections). These causes, displaying different patterns of inequity, can be identified and addressed at the local level. Indeed, this lends itself to the adage that maternal health can be confronted by us thinking globally and acting locally. This will be examined later.

Pacific Island countries (PICs), despite our isolation from the rest of the world and having relatively small populations widely dispersed over millions of square kilometres of the Pacific Ocean, are not spared the outstretched tentacles of maternal deaths and maternal morbidity. As would be expected, the actual number of births (and correspondingly the number of maternal deaths) among the population of smaller PICs is low. In fact, there were no maternal deaths reported annually for up to five years or more in PICs with a population of less than 2,000; 0 to 1 annually for PICs with a population of > 2000 to < 25,000 (four countries); 0 to 4–8 annually for PICs with a population of > 25,000 to < 250,000 (six countries); and five or more annually for PICs with a population of > 250,000 (three countries). This means that fewer than 30 maternal deaths are recorded annually in 13 of the 15 countries mentioned here, while the two other countries, namely Papua New Guinea with a population of about seven million, which recorded over 1,500 deaths (based on 870/100,000 total live births) annually and Solomon Islands with a population of about 500,000, which recorded over 30 maternal deaths a year (based on 236/100,000 total live births) a year (WHO 2008a, 2008b). It must, however, be emphasised that the low number of maternal deaths in smaller PICs should not give rise to complacency. The often quoted statement: “One maternal death is one maternal death too many”¹ should serve as a reminder to all PIC leaders that they are responsible for ensuring a favourable outcome for every pregnant mother in their countries.

Related to maternal deaths is the number of mothers who suffer a wide range of life-threatening and long-term health issues that arise from pregnancy-related complications. This maternal morbidity is common to all countries, regardless of population size, and is a major concern that needs to be addressed, even in countries where no death or only one or two maternal deaths are recorded every five years.

Most PICs are committed to developing a wide range of programs based on endorsed declarations and plans of action emerging from international meetings and conferences,² in order to achieve their common goal of reducing maternal mortality and morbidity. The results of this commitment to date have been encouraging and

1 Statement by the Minister of Health of Tonga, Hon. Dr. Viliami Ta'u Tangi.

2 International Conferences on Population and Development: Bucharest 1974, Mexico 1984, Cairo 1994

Primary Health Care, Alama Ata, Russia 1978

The Millennium Development Goals (MDGs), 2000

The Safe Motherhood Initiative: Nairobi 1987

The Safe Motherhood Technical Consultation held in Colombo, Sri Lanka, in 1997

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) 1981

The Convention on the Rights of the Child (CRC) 1990.

the adoption of the Millennium Development Goals (MDGs) in 2000, particularly MDG 5 *Improve maternal health*, has further revitalised the effort of PICs. The addition, in 2007, of Target 5B to MDG 5—*achieve by 2015 universal access to reproductive health*—has drawn attention to the need for access to reproductive health. PICs continue to work toward Target 5A—*Reduce by three quarters between 1990 and 2015 the maternal mortality ratio*—and Target 5B, although the progress made toward achieving 5A is much more visible at this stage. For example, PICs, with the exception of Papua New Guinea and Kiribati, are reporting that more than 85% of births are currently attended by skilled birth attendants (Robertson, 2007: 35) and the smaller PICs, such as Cook Islands, Niue, Palau and Tokelau, have reported no maternal deaths for several years. Countries like Kiribati, the Federated States of Micronesia (FSM) and Papua New Guinea, while facing challenges, are still working toward achieving the maternal mortality ratio (MMR) target by 2015.

In this connection, this paper focuses mainly on issues related to family planning (FP) in the Pacific: improving universal access to reproductive health. The value of FP as a tool in the reduction of maternal mortality and a life-saver both in developing and developed countries has been universally established. Correspondingly, PICs have for several years embarked on programs to actively promote the spacing and limiting of pregnancies through the practice of safe, affordable and acceptable modern methods of FP. Despite this concerted effort by each PIC, the unmet FP needs are still high in some PICs (UNFPA Pacific Sub-Regional Office/Suva).³

The following sections will facilitate discussion on existing issues related to improving universal access to reproductive health (RH). It is hoped that, through such involved discussion, solid and relevant recommendations for strengthening, revitalising and improving universal access to RH will emerge.

Personal contact as a major promotional tool to promote family planning in PICs

Oral communication has been a feature of the history of PICs for generations. It has been the means by which we have transferred knowledge and skills from one generation to the next. In its various forms, through legends, dances and even the notorious coconut wireless, oral communication has been an effective method of knowledge and information transfer.

Over the years, literally hundreds of Pacific Islanders have successfully practised modern methods of FP, resulting in the spacing and limiting of pregnancies. The question is: ‘Where are they now?’ Their successful experiences would make them excellent resources as motivators and promoters for members of their family and the community at large. It must be acknowledged that the subject matter presents challenges to open dialogue as it deals with sensitive topics that are often taboo. However, this form of communication and knowledge transfer should be considered and developed for appropriate use.

“Too many, too close, too early and too late pregnancies are a major cause of maternal, infant and childhood mortality and morbidity” says the Mexico City Declaration 12. Although this declaration was formulated in Mexico City 25 years ago, it is unfortunately not widely known, understood or discussed in work places, cities, towns, villages and communities. It is a major concern that most mothers at risk with pregnancy and childbirth complications are victims of the conditions described in this 25-year-old declaration, which suggests that there is a significant unmet need for limiting the number and spacing of births, especially among women at risk if they become pregnant. These risk factors should be actively and widely broadcast throughout Pacific communities via our conferences, meetings, the media and all available traditional ways of communication, including person-to-person contact.

The risk factors are:

- pregnancy at the age of 16 years and below: too young (early)
- pregnancy at the age of 35 years or more: too old (late)
- having more than 4/5 pregnancies: too many
- having babies less than two years apart: too close.

We can all play a part in promoting universal access to FP as certified FP motivators and promoters. More importantly, by practising what we preach, we become role models for those who we are trying to influence.

³ Based on presentation by Annette Sachs Robertson, Technical Adviser, Health Systems and RHCS, UNFPA Pacific SRO.

Promoting gender equality and empowerment of women

Gender equality is absolutely essential in order for male and female partners, husband and wife, to share the responsibility of decision-making on matters related to RH, including FP. Indeed, the full participation and partnership of both women and men is required in productive and reproductive life, including shared responsibility for the care and nurturing of children and the maintenance of the household.

Article 8.6 in the 1994 ICPD Program of Action states: “The role of women as primary custodians of family health should be recognized and supported”. This was interpreted in some quarters to mean that a woman’s place is at home, bearing children and looking after the family, in keeping with her role as primary custodian of family health. This view reminds us of what Martin Luther wrote many years ago: “Women... should remain at home, sit still, keep house, and bear and bring up children” (Table Talk), and: “Even though they grow weary and wear themselves out with child-bearing, it does not matter; let them go on bearing children till they die, that is what they are there for” (Works 20.84).

When this was first expressed, some five hundred years ago, it was probably accepted and respected as a social norm, leaving us with less than grand impressions of those tense times. Today, we are fortunate to have embraced gender equality and the recognition of equal partnerships between men and women, which we trust is a legacy that future generations will look at with admiration and appreciation. It is this equal partnership that is a necessary condition for promoting essential access in RH, including FP.

Primary health care concepts and approaches

The basic concepts about and approaches to primary health care (PHC), which appears to have been neglected in recent years, should be revisited and revitalised to support the promotion of universal access to RH and FP. PHC advocates and calls for:

- affordable, accessible and acceptable health care services to be close to where people live and work
- developing people’s potential to promote their own health
- health care services that the community (in partnership with government) can afford and sustain
- the promotion of individual and community self-sufficiency through the spirit of self-reliance and self-determination
- inter-sectoral collaboration
- national coverage
- the recognition of health as a basic human right.

Additionally, PHC also strongly advocates that: “... people have the right and duty to participate individually and collectively in the planning and the implementation of their health care” (Alma-Ata Declaration, Article IV, 1978).

In terms of services, the original three As of PHC (accessible, acceptable and affordable) have been enhanced in this paper to five As:

- **Accessibility:** It is extremely important to ensure that FP services are accessible. At times, services are not accessible due to the location of the service delivery point (SDP), hence, the decision of where the SDP is to be located is very important. In PICs, FP-SDPs should be within walking distance.
- **Availability:** FP services, including all the essential commodities and supplies that are advertised and promoted as being available at the SDP, must actually be available. It is frequently observed that SDPs are accessible but the services and supplies are not available.
- **Affordability:** FP services and supplies are provided free of charge in practically all PICs. The main issue of concern is the ability of FP clients to pay the cost of travel to an SDP. Efforts to resolve this through the establishment of community distribution points, home visitation by health personnel or community health workers have been attempted with varying success. Other solutions should be explored.
- **Acceptability:** The client choice and point of view should always be respected.
- **Accountability:** All FP service providers should be responsible for the quality of services they provide. Appropriate professional working knowledge and skills are essential components of this accountability.

PHC also advocates the integration and harmonising of related RH core thematic areas.

By fulfilling the aims of PHC—and in particular the five As—so that the right quality FP services and commodities of the right quantity, delivered to the right place at the right time and ultimately to the right person/client, universal access to FP will be promoted.

Management

Good quality, efficient and effective management is a key factor to promoting universal access to RH and FP. It involves a wide range of areas, including: information systems, logistic and supplies systems, ongoing training of RH personnel, promotion of outreach programs and activities and, above all, managing RH human resources. Undoubtedly, most PICs have developed strategies to meet the challenges.

A point to ponder with regard to management in general, based on an observation that the traditional approach to human resource management is still being widely practised. Is this type of management still valid and does it have a place today? Specifically, does it have a place in promoting universal access to RH and FP?

The traditional team management approach includes:

- ostrich management (self-explanatory)
- bad apple management (identify the non-performer and sack him or her)
- red cross management (identify the weakest link in the team and transfer)
- submarine management (submerge the management team for a weekend retreat and emerge at the end of the retreat with solutions to all the challenges)
- statue of liberty management (identify a suitable candidate and send him/her abroad for training in the hope that when she/he returns her/his newly acquired knowledge and skills will be passed on to others to learn and follow).

Reporting in rates or ratios versus in absolute numbers

In recent years, attempts have been made to report vital health statistics and indicators in absolute numbers instead of, or in addition to, rates and ratios, with varying degree of success. Absolute numbers are more meaningful in PICs because of the small numbers involved. For example, reporting 35 live births and one maternal death in Niue in a given year is more meaningful than reporting an MMR of 2875/100,000. Similarly, in 2008, Fiji reported an MMR of 31.7/100,000 live births (MOH, 2008). The absolute numbers are that there were 18,944 live births and six maternal deaths in that year, surely a more meaningful way of expressing the situation. In the same year, the infant mortality rate was reported as 13.1/1000 total live births; in absolute numbers 248 babies out of the 18,944 live births died before they reached their first birthday. The crude birth rate was 21.5/1000 of the total population. It would surely be more meaningful to also report that the number of babies born alive for every 1000 of the total population in 2008 was 408.

More examples concerning family planning in Fiji in 2008 are the contraceptive protection rate or family planning protection rate (the number of women in the child bearing age currently using FP) which was reported as 44.7%. Would it not be easier for the public to understand by also reporting that out of 191,345 women in the childbearing age (15–44 years), 85,531 were protected from pregnancy by FP? This information also suggests that 105,814 women in the childbearing age group were not using any FP methods and so were not protected from pregnancy: hence the need for universal access to RH, including FP.

Incidentally, a few weeks ago, the Fiji Ministry of Health reported the actual number of newborn babies who died within the first seven days of life. This created a lot interest among the public at large, resulting in a number of people sending letters to the daily newspaper expressing their concern in such a relatively high number. Is this an indication that the public finds it easier to understand the data presented in absolute numbers rather than in rates or ratios, as similar data have been reported in the past years in rates?

Could we adopt a reporting system amongst the PICs where RH indicators are reported both in rates (think globally) and absolute numbers (act locally)?

Family planning in the last three decades

Family planning was defined at the ICPD Conference held in Bucharest, Romania in 1974.

All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so; the responsibility of couples and individuals in the exercise of this right takes into account the needs of their living and future children, and their responsibilities towards the community. (ICPD, 1974)

This definition was reinforced at the 1984 International Conference on Population in Mexico with the addition of the words “and without coercion” and “should be taken into account” as illustrated below:

Major efforts must be made now to ensure that all couples and individuals can exercise their basic human right to decide freely, responsibly **and without coercion**, the number and spacing of their children and to have the information, education and means to do so. In exercising this right, the best interests of their living and future children as well as the responsibility towards the community **should be taken into account**. (Emphasis added.)

The first reference to reproductive health was made at the 1994 ICPD. The term was accepted as being a broad, holistic approach that included FP and was therefore adopted as a successor to maternal and child health (MCH).

Reproductive health is defined as:

A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters related to the reproductive system and to its functions and processes (in all stages of life).

RH implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a healthy infant. (ICPD-PoA: Subsection 7.2).

Reproductive health established a paradigm shift from the narrow spectrum of MCH to a wider and more comprehensive approach to reproductive health (and reproductive rights) based on the lifecycle approach in which RH concerns are not limited to women of reproductive age but are extended to include lifetime concerns and issues for both men and women from birth to death.

Some RH care providers in PICs have modified ‘from birth to death’ to ‘from the uterus (womb) to death (tomb)’ to ensure that all possible means of support are provided to avoid any conditions that may lead to the unwanted outcome of ‘tomb (intrauterine death or death in the womb) to tomb’.

It is also worth noting that, despite the renewed emphasis on RH, the major principles of FP, as stipulated in the original definition (with a slight modification in 1984), were retained as a core component of RH.

The following four major principles of FP are to be reviewed for consideration as an integral part of all FP programs in promoting universal access to FP:

- health considerations
- human rights considerations
- socio-economic considerations
- equality and equity considerations

Recommendations

1. Person-to-person communication as a major promotional tool to promote family planning in Pacific Island Countries.
2. Promotion of gender equality and empowerment of women as a necessary condition for promoting essential access to reproductive health, including family planning.
3. The basic concepts and approaches of PHC should be revisited and revitalised to support the promotion of universal access to RH and FP. The five As of public health care should be at the core of an integrated and

harmonised reproductive health program: Accessibility, Availability, Affordability, Acceptability, Accountability.

4. Good management should be promoted, involving information systems; logistic and supplies systems; on-going training of RH personnel; promotion of outreach programs and activities, and managing RH human resources.
5. Adoption of a reporting system where RH indicators are reported both in rates and absolute numbers in recognition of the smallness of PIC populations. This will allow non-technical policy-makers and the general public to understand the context of these indicators and their implications in promoting universal access to FP. It can create confidence in our systems or serve as an advocate for improvement.
6. Promote understanding of the conceptual shift from the use of term maternal and child health care to reproductive health by RH/FP care providers as this will further enhance their capacity to effectively promote universal access to RH/FP.
7. The four major principles of family planning should be reviewed for consideration as an integral part of all programs to promote universal access to reproductive health.

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Women's sexual and reproductive risk index for the Pacific

Sean Mackesy-Buckley

This paper provides a summary of Family Planning International's recent publication, *A Measure of the Future*. It outlines the purpose envisioned for *A Measure of the Future*, and it provides an overview of the three core parts of the publication.

In 2009, Family Planning International (FPI), in collaboration with the Secretariat of the Pacific Community (SPC) and Population Action International (PAI), developed *A Measure of the Future* (AMOF), a women's sexual and reproductive risk index for the Pacific (PAI 2007).

AMOF was based on PAI's 2007 publication *A Measure of Survival*, and was designed with the specific intention of providing Pacific policy-makers and sexual and reproductive health and rights (SRHR) advocates with:

- a reproductive risk index (RRI) that ranks 21 Pacific Island countries and territories (PICTs), according to where they stand in relation to a range of internationally recognised women's sexual and reproductive health indicators.
- a Pacific specific narrative outlining the main challenges that Pacific Island women continue to face in relation to SRHR
- steps outlining how these challenges can be overcome.

It is intended that policy-makers and advocates will use AMOF to help move the Pacific region closer to achieving the International Conference on Population and Development's Program of Action (ICPD POA), and the Millennium Development Goals (MDGs).

Measuring sexual and reproductive risk in 21 PICTs

AMOF has developed the first RRI for the Pacific region. For the first time, this allows stakeholders in Pacific SRHR to see an aggregate depiction of the sexual and reproductive risk in 21 different PICTs.

AMOF's RRI was based on an approach developed by PAI. This approach, known as the life-cycle approach, was developed in consultation with experts in the field of population and reproductive health and was used in *A Measure of Survival*.¹ This approach uses sexual and reproductive health indicators to measure the four core components of reproduction: sex, pregnancy, childbirth and survival.

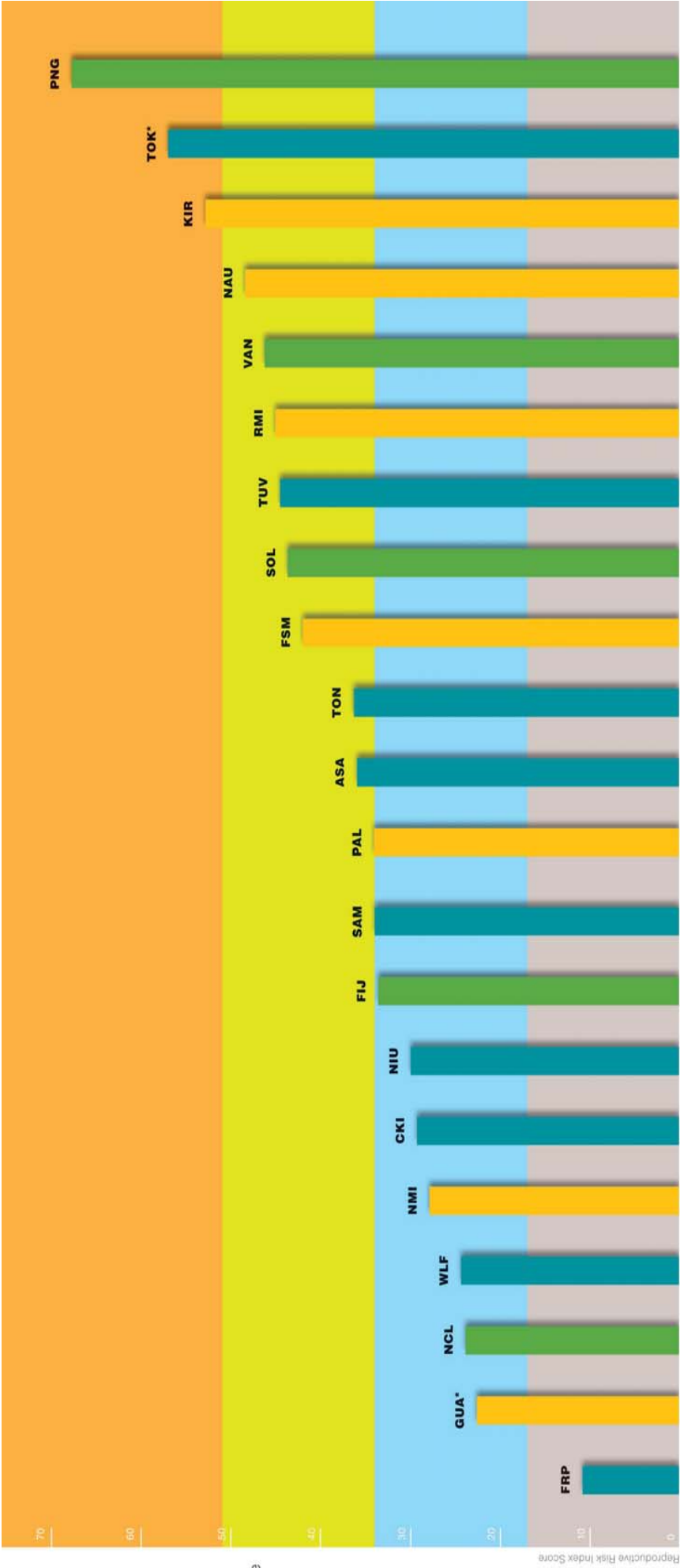
Table 1 Indicators used in *A Measure of Survival* and *A Measure of the Future*

	<i>A Measure of Survival</i>		<i>A Measure of the Future</i>	
	Safe & Healthy	Voluntary	Safe & Healthy	Voluntary
Sex	HIV prevalence	Girls married before age 18	Chlamydia prevalence	Median age at marriage
	Adolescent fertility		Adolescent fertility	
			Female secondary school enrolment	
Pregnancy	Antenatal care 4+ visits	Family planning demand met	Antenatal care 1+ visits	Use of modern contraceptives
Childbirth	Skilled attendance at birth	Abortion policy	Skilled attendance at birth	Abortion policy
Survival	Maternal mortality ratio		Maternal mortality ratio	
	Infant mortality ratio		Infant mortality ratio	

AMOF uses a composite of ten indicators (Table 1) to build the index. A formula was used to convert the value for each selected indicator into a score between 0 and 100. The scores of all ten indicators for each PICT were then averaged. The higher the average score, the higher the sexual and reproductive risk to women in that country. The result is a simple ranking of PICTs by their aggregate sexual and reproductive risk. This is further categorised by four risk quartiles (Figure 1).

1 PAI developed the 'life-cycle' approach in consultation with Stan Bernstein and John Bongaarts.

Figure 1 Ranking of aggregate sexual and reproductive risk scores in selected PICs
Orange = Very High Risk Yellow = High Risk Blue = Moderate Risk Grey = Low Risk *Tokelau & Guam should be ignored.



The final RRI presents credible results that are broadly consistent with the findings of the most recent MDG progress reports covering the Pacific as well as poverty line data from the Pacific (Coates & Naidu, 2009). For example, the index supports the widely held notion that women in countries that have limited infrastructure, limited service provision and large geographical barriers are at a higher risk of poor SRHR. In the Pacific, these include Kiribati, Papua New Guinea, Vanuatu, Solomon Islands and the Republic of the Marshall Islands. Similarly, the RRI supports the argument that women who live on relatively well-developed countries that receive significant health system support through territorial status, political union and free association, are at less risk. In the Pacific, this includes the Cook Islands, Niue, New Caledonia, Wallis and Futuna, French Polynesia and Guam. The islands which fall in-between high and low risk are more difficult to categorise. However, they tend to be countries that have fewer geographical challenges, some good infrastructure, receive remittances and have some economic stability.

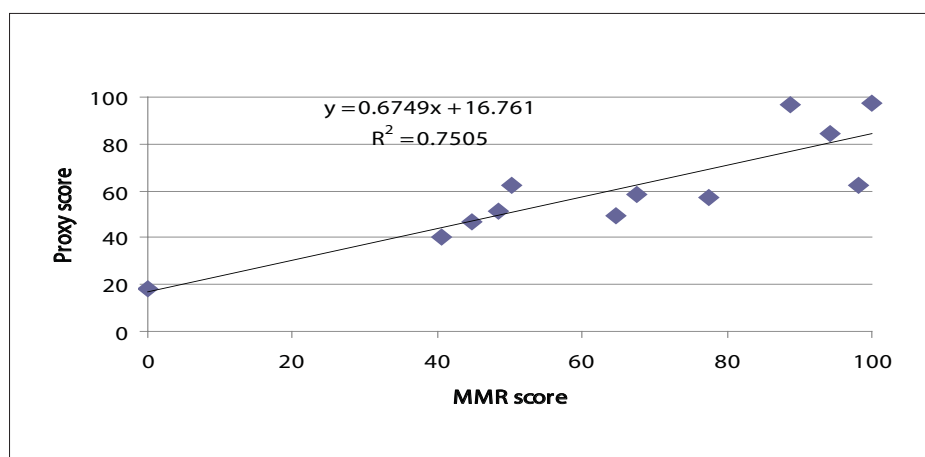
While the RRI is robust, it does have limitations. The most significant of these is that the accuracy of the RRI is strongly influenced by the availability of good quality data. When indicator data are missing, it directly influences the average score, or rank, that the country receives. Fourteen of 21 PICTs were missing data on at least one indicator. Similarly, in some instances, the choice of indicator was determined by the availability of data, rather than the quality of indicator. For example, missing data meant that the indicator one or more antenatal care visits had to be used over four or more antenatal care visits—the latter indicator being a much stronger indicator of good health care.

The accuracy of available data also presented a challenge. For example, available data were often out of date (the oldest data used were from 1990). Finally, while the data collected give an impression of a PICT's overall well-being, they often hide disparities within a PICT.

While overcoming many of these data challenges will rely on improvements to data collection processes being made over time, the RRI has developed and trialed a useful strategy for addressing missing MMR data. Nine PICTs were missing MMR data, an important indicator of maternal health in a country. To overcome this data gap, a proxy determinant for each of the nine PICTs was developed by averaging the index scores of three other indicators recognised as having a strong correlation with MMR—total fertility rate (TFR), skilled attendance at birth (SAB) and infant mortality rate (IMR).²

To test the accuracy of the proxy determinants, proxies were developed for those PICTs that had MMR data. The proxy was then compared to the real MMR using a regression table. Figure 2 shows the relatively strong relationship ($R^2=0.7505$) between the proxy and the real MMR. While further research into how these proxy determinants can be refined and most effectively used is necessary, they enable the RRI to provide a more comprehensive picture of sexual and reproductive risk in the 21 PICTs examined.

Figure 2 MMR and proxy determinant scores



² There is a range of direct and indirect factors that can be linked to maternal death. TFR, SAB and IMR were chosen because of the availability of data and because they are amongst those factors with the strongest correlation to maternal death. See: UNICEF, 2009 'The State of the World's Children 2009: Maternal and Newborn Health' UNICEF, New York, USA: 8–15.

A Pacific specific overview of women's SRHR challenges

The availability of data on SRHR in PICTs is continually improving, as is the analysis of this information. However, the diversity of the 21 PICTs continues to ensure that much of the region's research remains specific to a single issue, country, or sub-region. One result of this is that it can be difficult to develop a comprehensive picture of the SRHR environment across the region.

AMOF seeks to overcome this challenge by outlining in one document, what the region's key SRHR issues are for women. The picture that emerges from AMOF identifies some important successes like increases in vaccinations, antenatal care coverage and skilled attendance at birth. Yet it also reveals a wide range of issues that demand urgent attention and that threaten to ensure targets set out by both the ICPD POA and the MDGs will not become a reality for all Pacific Island women.

Underpinning and interconnecting these challenging issues is a series of cross-cutting social determinants of health: poverty, urbanisation, gender discrimination, violence against women, geography, and education. Unless addressed, these issues will continue to shape women's living environments in ways that are not conducive to good SRHR. They will also continue to significantly exacerbate the strain on the region's predominantly under-resourced but over-burdened health systems, systems that are often fragmented, that face technical capacity limitations and that often struggle to maintain the needed numbers of trained professionals.

Compounding these broad environmental and systemic challenges is a range of more specific issues that lead to women having poor SRHR. The region remains at risk of HIV spreading and many PICTs have alarmingly high STI rates (other than HIV); some are amongst the highest in the world. At the same time, the epidemiology of STIs in the Pacific—particularly HIV—is still not fully understood. Directly compounding the STI challenge are issues around access to and use of contraception and family planning. Contraception supplies are often unreliable, poorly managed and under-utilised; issues that are particularly relevant to young people who are at an increased risk of STIs and stigmatisation for accessing SRHR services and information.

Linked to the region's contraception challenge are the region's high rates of adolescent fertility. Teenage pregnancy continues to be a significant contributor to poor maternal health and maternal death. Social and cultural taboos also mean teenage mothers can be subjected to discrimination and stigmatisation. This in turn has an impact on young women's willingness to seek necessary antenatal care assistance, a service which, like emergency obstetric care, too few Pacific Island women can regularly access. This is particularly the case for women in rural outlying communities who have little or no access to money.

Despite international research showing that as much as 13% (IPPF 2009:4) of all maternal death is attributable to unsafe abortion, there is an almost complete lack of research exploring the relationship between unsafe abortion and Pacific maternal deaths. This continues in the face of ever-growing anecdotal evidence that unsafe abortions often occur in the region.

After decades of work on preventing child and maternal death in the Pacific, maternal and infant mortality remain high in a number of PICTs. Across the region, it is estimated that every day five women will die from preventable childbirth and pregnancy related complications—a toll that is probably under-estimated and largely avoidable.

AMOF also touches on some of those issues often forgotten about, such as the SRHR needs of people living with disabilities and the need to recognise that men and boys must play a direct part in improving the SRHR of women and in improving gender equality.

We can overcome these challenges

The range of SRHR challenges that PICTs face often appears daunting, yet they are not insurmountable. For example, Sri Lanka has shown that when a concerted effort is made, good progress can be made towards improving the SRHR of women (PAI 2009: 28). Further, decades of research from around the world have revealed exactly how this progress can be achieved. The problems have been identified and the solutions are known—the only barrier left is using this knowledge to take action and to create change.

AMOF provides those with the power to make change with a single resource that outlines the SRHR challenges in the Pacific and how they can be overcome. While some of the recommendations made are not new, they remain key and must continue to be advocated for and acted upon in order to ensure positive change.

Pacific leaders, policy-makers, SRHR advocates and influential people must do all they can to ensure the following actions are taken to improve women's SRHR in the region: build, maintain and translate political support into action; stop harmful practices and discrimination; integrate SRHR and HIV activities at all levels; expand and improve access to all SRHR services; educate people about their SRHR—especially youth; ensure SRHR services reach youth; commit to family planning; build health workforces that work for women; trial innovative approaches to strengthening health systems such as the 'diagonal approach'; maintain and build on efforts to improve supply systems; urgently begin research on abortion in the Pacific and make it safe, accessible and legal; involve and engage men and boys in SRHR; improve information and data collection processes; maintain commitment to aid effectiveness; and continue to attend to the wider socio-economic determinants of health.

If these steps are put into action and that action is sustained, the ICPD POA, the MDGs and the SRHR they strive to achieve, will become a reality for all Pacific Island women.

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Family planning in Tonga: improving universal access to reproductive health

Sela Paasi

The Kingdom of Tonga, following the International Conference on Population and Development (ICPD) in Cairo in 1994, adopted the concept of reproductive health (RH) as one of its ongoing major health priority programs.

RH after ICPD established a paradigm shift from the narrow spectrum of maternal and child health (MCH) to a more comprehensive approach to reproductive health (and reproductive rights) based on the lifecycle approach in which RH concerns are not limited to women of reproductive age but are extended to include lifetime concerns and issues for both men and women, from birth to death.

Through its program, the Government of Tonga expanded its health facilities to include new health centres and clinics to provide MCH services in all districts, including rural areas and the outer islands.

The transition from MCH to RH was challenging. However, over time, the government through its Ministry of Health fully endorsed and adopted the wider concept of RH and successfully mainstreamed the RH program into the national health care system and, in particular, the primary health care system. Currently, the RH program is promoted and implemented as one of the MOH's priority programs and, to date, the results speak for themselves.

To maintain and improve the results, the Government of Tonga through the Ministry of Health, decided to join some other Pacific Island countries in producing an RH Policy. With the technical and financial support of UNFPA, we were able to develop the policy before the end of 2008.

Historical background to reproductive health

The Government of Tonga is fully committed to the implementation of the RH program and will ensure that RH services are accessible, available, acceptable and affordable for all the people of Tonga and that all health personnel are accountable for the services that they provide. Under the Ministry of Health's Corporate Plan 2008–2011, the Minister for Health, Hon. Dr Viliami Tangi, echoed this commitment through his RH Mission Statement: "To provide effective and quality services to all women of child-bearing age, infants, adolescents, children and others through reproductive strategic approaches throughout the country".

The government demonstrated its commitment to the Family Planning (FP) program by integrating FP with MCH following the International Conference on FP in Bucharest in 1974. Since then, the MCH program has been known and promoted as the Maternal and Child Health and Family Planning Program. The integration of MCH and FP helped in the gradual reduction of religious and cultural barriers to FP.

Primary health care (PHC) calls for close intra- and inter-sectoral collaboration and cooperation between the government and non-governmental organisations/civil societies in a concerted effort to develop people's potential to promote their own health. MCH/FP was re-energised by PHC in taking the services closer to where people live and work. This led to several community outreach programs and activities, along with home visits. (Incidentally, the Alma Ata Declaration means a lot more to the Tongan people as the President/Chairman of the Assembly at this historical event was the then Minister for Health, Hon. Dr Sione Tapa).

The launching of the Safe Motherhood Initiative in Nairobi in 1987 again reinforced the government's commitment towards the implementation of its MCH/FP program to ensure that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth without suffering injury, disability or losing their lives or that of their babies.

The progress made under the MCH/FP program resulted in an increase in the number of expectant mothers attending antenatal care clinics and subsequently being delivered by trained health personnel; a progressive reduction in infant and maternal mortality (death) and morbidity (sickness); an increased number of children who received vaccination against immunisable diseases and an increased number of individuals practising family planning (FP) despite cultural and religious barriers.

The core elements of RH care include:

- safe motherhood
- family planning
- prevention and treatment of STIs and HIV
- prevention and appropriate treatment of infertility
- prevention and the management of the consequences of abortion
- sexual health promotion, education and counseling, including for young people.

The government, with the support of its development partners, notably UNFPA, WHO, UNICEF and SPC, has developed its RH program to a very satisfactory and high level.

Because of the importance of RH to Tonga, the Hon. Deputy Premier and Minister for Health endorsed the change of name of the MCH/FP Section to the Reproductive Health Section on 24/10/2003.

Table 1 Tonga: country profile, 2008

INDICATORS	2008	
Estimated population ('000)	103.3	The data in Table 1 clearly demonstrate the current health status and the encouraging results that have been achieved to date.
Annual population growth	0.30	Evidence shows that the people of Tonga are receiving good coverage of basic primary health care services, despite the scarcity of resources and the geographically wide distribution of the population in the scattered islands. The Public Health Division that delivers the majority of these primary health care services continuously achieves their targets through regular monitoring (quarterly reports and monthly meetings) of the aforementioned indicators. The Ministry of Health acknowledges the huge contribution of members of the international donor community such as JICA, UNFPA, UNICEF, WHO and SPC in terms of mentoring and funding these services.
Percentage of population less than 4 years	13.00	
Percentage of population between 4-14 years	25.00	
Percentage of urban population	36.00	
Rate of natural increase	1.84	
Crude birth rate (per 1,000)	25.0	
Infant mortality rate	16.4	
Maternal mortality ratio (per 100,000)	76.1	
CPR (% of women using modern contraception, 2008)	27.0	
Life expectancy (male)	70	
Life expectancy (female)	72	
Infant mortality rate	16.4	
Total fertility rate	3.7	
Total health expenditure, amount (in million \$)	12.82	
Total expenditure on health as % of GDP	6.10	
Per capita total expenditure on health (in US\$)	105.0	Tonga has achieved most of the threshold levels for the social indicators in the ICPD except the contraceptive prevalence rate (CPR). According to the data given in Table 1, 27% of women of childbearing age used some form of modern contraception during 2008. However, it is possible that the CPR is higher than reported, as contraceptives obtained from private sources have not been included in the government statistics and women who have had a bilateral tubal ligation in the past have not been consistently included as current users. In spite of the decline in the number of births and the low natural population growth rate in Tonga, the government has continued to emphasise the importance of family planning programs from a health and rights-based perspective.
Physicians (per 100,000)	59.0	
Dentists (per 100,000)	11.7	
Nurses (per 100,000)	337.0	
Immunisation coverage for pregnant women TD first dose	99.00	
Immunisation coverage for pregnant women TD second dose	98.00	
Percentage of women attending the antenatal clinic	98.00	
Percentage of deliveries attended by trained personnel	100.00	

Source: Ministry of Health, Reproductive Health Division

The inclusion of the perinatal mortality rate as an RH indicator is highly commendable, as it is more sensitive in terms of monitoring the quality of the safe motherhood (maternal and child health care) program than the infant mortality rate. Despite the progress made, however, there is still a lot more work on the various RH thematic areas to be undertaken. The Second Generation Surveillance Survey of HIV and other STIs carried out in the Kingdom in 2004 indicated a low HIV prevalence but the STI prevalence (especially chlamydia) was relatively high amongst the 348 pregnant women that were tested. As pregnant women are arguably at lower risk of infection, the overall burden of these STIs in the country is likely to be higher than these observed rates, indicating a serious risk that, should HIV infection become established locally, it could spread quickly. This realisation poses a major challenge to the future program under the STI thematic area.

The same level of challenge will be faced under the adolescent sexual and reproductive health (ASRH) thematic area program, as a high percentage of STI-confirmed patients are in the 15–25 age group. Teenage pregnancy continues to be a challenge that needs ongoing attention with an appropriate program of action.

The demand to increase the number RH personnel, upgrade their skills and improve health facilities with a secured provision of RH commodities and supplies are more challenges. The upgrading and maintaining of hospitals at comprehensive and basic Emergency Obstetric Care level should also continue to receive priority attention.

The government, through the MOH, is committed to maintaining and improving on the results attained so far and is confident of meeting all its MDG challenges, especially in the reduction of child mortality and maternal mortality, and in successfully combating STI/HIV.

Universal access to reproductive health services

Even with the progress that has been made, there are five areas considered as challenges for attaining universal access to reproductive health services in Tonga.

Political commitment

The Kingdom of Tonga has a long Christian history and Christianity has influenced the formation of the Government of Tonga. There are certain legal prohibitions on the procurement of an abortion/miscarriage (self-induced or assisted in any form) which do not fully align with the expectation of universal access to sexual and reproductive health services. It is considered too sensitive an issue to discuss openly and it may result in a lot of misunderstanding, if not grievance. Additionally, there are some elements of gender discrimination that have been adopted, incorporating cultural values that do not fit with equality of access to reproductive health services. For example, a husband's written and signed consent is required for his wife's sterilisation, whereas the husband does not require his wife's consent if he wants a vasectomy.

Family planning and RH commodities security

The initial context where family planning was sold to the public was inappropriately interpreted as being against the doctrine of certain church denominations; children are considered as gifts from God and should not be avoided or delayed by any means. This criticism started fading recently when the context shifted from over-population measures to being beneficial for the overall health of the family. However, some uncertainty remains and it is hard to completely remove it as long as it remains firmly linked to churches' doctrine.

Due to financial constraint, the majority of existing reproductive health clinics do not meet certain requirements of some family planning methods such as appropriate rooms for counseling, intrauterine device (IUD) insertion, equipment and good quality adolescent health services. The appropriateness of the health centre and reproductive health infrastructure is critically important to guarantee confidentiality at all times and ensure client satisfaction.

Reproductive health staff have experienced difficulties in managing reproductive health commodities based on unstable or low numbers of utilisation. Given the current global financial hardship, it is not wise to invest funds in under-utilised commodities. Likewise, it is equally important to avoid shortages of supplies as a result of inadequately forecasting the future consumption of reproductive health commodities.

Adolescent sexual and reproductive health

Tongan culture also has a lot of taboos which serve to protect the adolescent age group from the risk of early involvement in sexual activity. Globalisation, however, has loosened some of these valuable, inexpensive measures, and this has led to a decline in family discipline, from restrictive to more casual attitudes in matters concerning sex.

Similarly, it is now evident that there is decreasing dependency on parents, which allows the adolescent age group to leave home at an early age, drop out of school early and seek employment. This subsequently exposes adolescents to the risks of unsafe sex.

The above problems are thought to be a consequence of the changing composition of the Tongan family. There has been a move away from the extended family to the nuclear family, which isolates grandparents, aunts and uncles who used to positively contribute to managing and disciplining adolescents. Additionally, Tongan families are now seeking better employment, better education and a higher standard of living, but this has its drawbacks.

Sexually transmitted infections, reproductive tract infections and HIV

The Kingdom of Tonga has a high literacy rate but not all students successfully complete high school. Recent evidence shows that there is a high proportion of drop-outs in the adolescent age group and that this is positively correlated to rising unemployment, particularly in urban areas. Correspondingly, rural–urban migration is also rising and this encourages adolescent drop-outs to engage in the illegal use of drugs, prostitution and other related sexual activities.

Similarly, there are new night clubs, bars and other social clubs in urban areas. They welcome clients but they are the scene of excessive consumption of alcohol that often leads to unsafe sexual activity and defeats the great efforts put into protecting adolescents.

Geographical isolation

Table 2 Population density in Tonga

Population density (population)	Number of villages
810-2560	6
190-810	62
130-190	26
60-130	43
0-60	27

As Table 2 shows, the population of the Kingdom of Tonga is unevenly distributed in 64 villages. Population density determines the workload of each health station, and rural to urban migration introduces extreme challenges, such as failure to follow-up.

Resource constraints do not allow the Ministry of Health, as the major provider, to decentralise advanced and specialty trained staff. They are stationed at the Referral Centre (main Hospital), as is advanced equipment. At times, some of the reproductive health services are not readily available when required in a remote location and this forces some members of the at risk population to travel to the Referral Centre. Transporting health care personnel to the remote locations relies heavily on donor partners and community support in the form of sea transport etc. In unfavourable weather, reproductive health staff are exposed to a lot of risk.

The way forward

There is no doubt that any existing family planning policy or regulation that is discriminatory should be eliminated or changed. Simultaneously, reproductive health services should be viewed as an easy public choice, so it is important to avoid any associated cost in all reproductive health service delivery points.

In response to traditional and religious reaction, there is a need to strengthen and revitalise the family planning outreach program and activities through home visits, community seminars, workshops, meetings, radios broadcasts, newspaper articles and television. Through this approach, individuals will have time to learn and accept the importance of reproductive health as a concept and how it fits in with aspects of life in Tonga.

The Ministry of Health is jointly investing in a great deal of refurbishment and development of health centres and reproductive health clinics, which not only meet the basic requirements of reproductive health services but exceed the average requirement for some overseas clinics. The Reproductive Health Section, in close partnership with its international partners, has acted to develop the first National RH Policy and Strategy Document 2008–2011. It has been approved and the implementation is progressing well towards certain targets. Amongst these is the push to engage men as partners in family planning peripheral activities.

Table 3 Projected strategies

No.	Strategies	Affordable	Long/short term
1.	Increase human resources	Not now	Long term
2.	Transportation by air/sea	If funds available	Short term and long term
3.	Electronic communication	If funds available	Short term and long term
4.	Strengthen the referral system	If funds available	Short term and long term

From the administrative point of view, the strategies tabulated in Table 3 need to be implemented, since they will facilitate efficient delivery of reproductive health services. These strategies are based on the available resources. For instance, more human resources are definitely required but unfortunately our government might not be able to bear this operational cost during the financial crisis. They should, however, be affordable in the long term.

Family planning key interventions in Solomon Islands

Judith Seke

Background

The Family Planning Program in Solomon Islands is part and parcel of the day-to-day routine of health services delivery. The active role and impact this program would have on maternal and child health was never realised until after Cairo in 1994. Since 1994, the former Division of Maternal and Child Health has been renamed the Reproductive Health Division (RHD), with an emphasis on reproductive health (RH) and family planning (FP). While the Division gained momentum in its efforts to deliver reproductive health and family planning services after Cairo, all programs and initiatives were disrupted during the 1999–2001 ethnic tension. It was also realised that the outcome indicators that relate to reproductive health and family planning were not encouraging. Therefore, in 2006, the Division renewed its commitment to ensure that the family planning program in the country is repositioned. Five key interventions are described here.

Provincial family planning training workshops

Following regional training on RH and FP in 2005 with the introduction of the WHO Medical Eligibility Criteria and Standard Recommended Practice in FP, the RHD in collaboration with UNFPA, carried out as an initial step a substantial review of the Solomon Islands Family Planning Manual, now in its third edition, to ensure that the reference documents were relevant and meaningful within our context and at our level. The Solomon Islands Family Planning Manual is a reference for most FP work in the country through current initiatives, such as the Distance Education Program and the Midwifery Training Program, and is widely distributed to all health workers and health facilities. Since the inception and introduction of this FP manual, together with other FP materials such as the FP wheel at provincial FP training workshops, over 750 provincial health workers, including all provincial medical directors, RH and FP provincial coordinators, MIRH coordinators, midwives, nurse aides and health promotion officers, have been trained and have access to FP manuals and the FP wheel at health facilities.

The family health card

The family health card is an innovative strategy that allows provincial health workers to enter the privacy of individual households. Through the family health card strategy, problematic areas in reproductive health and family planning (e.g. low FP coverage) are identified and analysed, strategic planning for interventions is addressed at area health zones and health catchment areas, and timely home visits are undertaken.

Family planning and reproductive health commodities

Whilst it is crucial that provincial health workers are up-skilled and local capacity is developed, it is of equal importance to make available the necessary FP and RH commodities (tools, equipment, drugs, supplies, contraceptives, etc.) to ensure that good quality FP services are delivered on time to those requiring FP and RH services. The Reproductive Health and Family Planning Program in Solomon Islands has, over the years, received and continues to receive support through UNFPA and WHO in the procurement of the necessary RH and FP equipment and supplies, which are distributed to provincial health facilities.

Men in reproductive health

The ‘Men in Reproductive Health’ intervention, institutionalised through the health sector, gained momentum following regional training for former Reproductive Health Training Program graduates in a reproductive health program in 1998.¹ The graduates become strong advocates for FP and RH, targeting the male population. The concept of men’s role in reproductive health was introduced, including non-scalpel vasectomy (NSV). Following initial and follow-up NSV training in 2006 and 2008 of health workers, and identifying an NSV master trainer who came on board in 2009, the NSV program has become a key component of the national RH

1. The Reproductive Health Training Program of the Fiji School of Medicine is a UNFPA-supported program for mid level health professionals and midwives.

and FP program in the country. There is now an increasing demand for the service. Male nurses, who are very much engaged in RH and FP activities and interventions, are positioned to be key motivators and advocates for family planning services for men. Since 2006, 360 men have undergone the NSV surgical procedure and this number is on the rise.

Institutionalising family planning

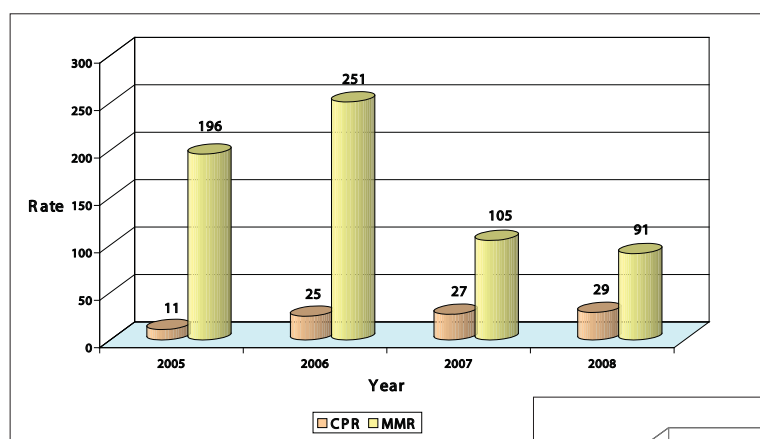
A family planning component has been integrated into the curriculum of training programs (Midwifery Training and Distance Education). It is competency-based learning with the objective that, upon completion, the midwives are competent to provide family planning services, such as IUCD insertions. So far, 137 midwives have undergone the midwifery training program and the Ministry of Health's aim is to ensure that there are one or two midwives per shift on a daily basis in all hospitals, and a midwife in all area health centres and rural health centres.

Family planning key results and achievements

In repositioning our family planning program, a few notable results and achievements can be observed. They are described below.

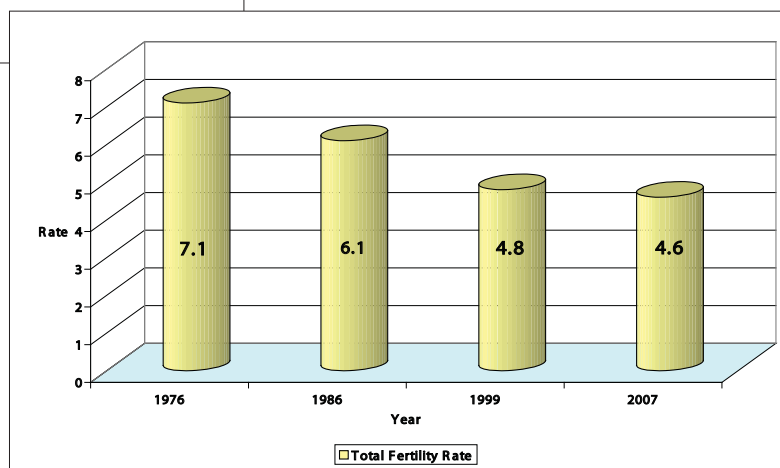
1. The contraceptive prevalence rate (CPR) has improved but varies from province to province with 17% in Choiseul, 18% in Malaita, 24% in Isabel, 33% in Temotu and 34% in Central Islands. With the total number of NSV clients currently at 342 and increased demand for NSV, this will have implications for increased CPR. On the basis of DHS 2005/2007, our current CPR is 27% (Figure 1).
2. The number of maternal mortality deaths for 2009 reported so far is 17, with seven cases occurring in the National Referral Hospital (four of which were from indirect causes), three on Guadalcanal, three on Malaita and four in Western Province.). Assuming that indirect causes of maternal death are excluded, then Solomon Islands' current maternal mortality rate (MMR) is 91/100,000 (MOH Report) (Figure1).
3. The total fertility rate (TFR) is reported to have declined between 1976 and 2007 (Figure 2), but the adolescent fertility rate remains high. Through the Adolescent Health Development interventions and strategies, it is hoped that we can improve in this challenging area.

Figure 1 Solomon Islands CPR and MMR (2005-2008)



Source: Ministry of Health reports
2005–2008

Figure 2 Solomon Islands TFR (1976-2007)



Source: Ministry of Health reports
1976–2007

Family Planning Key Challenges

1. The **stock-out issue** of contraceptives, particularly condoms and Depo-Provera, which are the most commonly used methods. In the case of Depo-Provera, when there is a stock-out, the drop-out rate increases. Timely procurement and distribution from national for provincial centres is therefore important, since geographical, logistical and administrative constraints are very high.
2. **Resistance to modern contraceptive methods** currently exists and therefore advocacy strategies for behavioural change need to be in place. FP service providers require the skills to be able to motivate and advocate strategically.
3. **Inconsistencies in family planning reporting** by various sources still exist, particularly between national level reporting and provincial level reporting. For example, FP/CPR coverage was higher when reported by the family health card strategy than when reported through the MOH information system. However, through provincial FP training workshops, these issues are addressed.
4. **Geographical constraints and high logistical and administrative costs** make outreach activities on family planning, such as motivation and advocacy, distribution of FP supplies and follow up actions, a major challenge.

Recent progress

1. Provincial implementing partners are now more engaged and taking a lead role in RH and FP activities at the area health zone level.
2. Improved and increased CPR has been noted at provincial level (Malaita, Choiseul, Central Islands) using the family health card as a 'passport' for home visits to individual families.
3. There is increased demand by men for RH and FP services, which includes NSV service.
4. In Central Islands and Malaita provinces, political support is mobilised by RH and FP advocates.
5. There is increased partnership with relevant stakeholders, including development partners.

Strategic directions and the way forward for family planning

1. The National Health Strategic Plan (2011–2015) must be developed and the RH and FP Policy and Strategic Plan 2010–2012 finalised, with clear implementation plans at all levels.
2. In order for Solomon Islands to move forward in the achievement of the Program of Action of the ICPD and the achievement of the Millennium Development Goals, first and foremost to the country must maintain continuity but expand on proven strategies to reposition family planning as a reproductive health right of all individuals, male and female, irrespective of marital status, age, religion, culture and educational background through current related RH and FP initiatives and interventions.
3. Roll out the 'Men in Reproductive Health' intervention, including NSV and youth-friendly centres and services in the provinces. This would have to be accompanied by timely delivery of appropriate equipment and tools at provincial level.
4. Integrate measures to address emerging issues of gender-based violence and humanitarian and emergency responses with family planning services.

Plenary 5

Mortality, morbidity, obesity and nutrition

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Mortality, morbidity, obesity and nutrition in the Pacific

Richard Taylor

Background

The International Conference on Population and Development (ICPD) adopted a Program of Action at the meeting in Cairo (Egypt) in September 1994 which considered a wide range of issues related to population, development, health and mortality, gender and reproduction, the family, urbanisation and migration, education, and other topics (UNFPA 1994). This was followed by the adoption of Key Actions for further implementation of the ICPD Program by the UN General Assembly in New York (USA) in July 1999, where specific issues relating to population and development concerns, gender equity and reproductive rights and health were reiterated and expanded on (UNFPA 1999).

Chapter 2.16 (c) of The Key Actions specifically mentions: “determine the causes of the stagnation or increase in mortality levels among adult populations and develop special policies and programmes....”; and, in the same chapter (37,38), improvement in data systems and indicators, including accurate population mortality and morbidity data capable of disaggregation by age, sex, region, period, etc. (UNFPA 1999). These Key Actions from the New York (1999) meeting are important, since they were not mentioned or emphasised in the Cairo ICPD Program (1994) and they relate specifically to the subject of this paper. Their mention in the New York (1999) meeting are probably reflections of the heightened concern with adult mortality and morbidity in the economically ‘transitional’ countries of Eastern Europe, the former Soviet Union and Central Asia, particularly after 1990, although such situations had been evident before (including in the Pacific and Australia); and the increased attention given to the need for accurate measurement of mortality and morbidity in populations, particularly prompted by the first Global Burden of Disease study (GBD I, GBD II 1996; Murray & Lopez 1997 a, b, c) and increasingly seen by agencies and countries as essential for the planning and evaluation of development assistance. Although mention is made of “...facilitating the demographic transition...” in the Cairo Meeting (1.8), no mention is made of the epidemiological transition.

Introduction

In line with the title given by the organisers, the approach taken in this paper is to proceed backwards from mortality, to morbidity, and then to obesity and nutrition. The implication of this title, and asking this author to present, is that this presentation is mostly about the epidemic of non-communicable chronic disease in adults, its causes from obesity, nutrition and other determinants, and its consequences in terms of mortality and disability. This presentation and the analyses involved use of a demographic and epidemiological approach—that is, an approach befitting a conference that concerns populations—rather than a clinical or patient perspective. Further, this presentation seeks to anchor the discussion of mortality trends and differentials within the frameworks of the demographic and epidemiological transitions, and seeks to relate the situations and changes in Pacific Island states to concurrent and previous occurrences in other populations, near and far.

“The only things certain in life are death and taxes”¹. Public health and medicine are concerned with preventing and minimising illness and disability, and preventing premature death, as far as is feasible. Life as we know it has 100% mortality. The objective in terms of mortality reduction is to push out the age of death as far as possible so that individuals, families, communities and society can reap the benefit of life, support one another, and transmit their accumulated resources, knowledge and experience across generations. We know what is currently possible in terms of longevity. Japan has the highest life expectancy at birth (around 82 years) ever recorded for a substantial population (127 million), and life tables like this have been used for comparative analyses, such as calculating years of life lost from premature mortality at various ages from particular causes. All-age mortality, whether from all causes, or particular causes, is of very limited usefulness in analyses for planning or in evaluation of health-related interventions.

The Pacific Island region is extensive in area and very diverse in its geography, history, culture, social and economic development, and interactions with much larger populations of the Pacific Rim or Europe (especially France); and it has been extensively influenced by migration. The demographic and epidemiological transitions are at different stages in different populations. However, Pacific Island states are not unique in their experiences

1 Attributed to Benjamin Franklin, widely used by Mark Twain

of these transitions, nor in the wave of infectious disease mortality following initial contact with Europeans, which likewise affected indigenous populations of the Americas. Comparisons within the Pacific Islands will be complemented by comparisons with other populations across time and place.

Mortality and morbidity

The demographic and epidemiological transitions are often dignified by the epithet ‘theory’. From such theories we should expect, at least: a succinct description of what is observed; a cogent and integrated explanation of the mechanisms of what is observed; and a tool which can be used to predict what ought to occur under similar situations into the future.

Demographic transition

The basic propositions of the Demographic Transition as enunciated by Stollintz (1955) are:

- (a) Economic modernisation, technological advance, and social Westernisation in underdeveloped countries lead to reductions in mortality and fertility;
- (b) The methods by which mortality is reduced are more rapidly and effectively introduced than processes leading to reduced fertility, and mortality reduction is everywhere regarded as positive whereas departures from traditional high fertility patterns are often resisted;
- (c) Thus, in the short term, mortality will decline more rapidly than fertility, and that for some time to come accelerated population growth will result. (Stollintz 1955).

By way of critique, it should be noted that “Economic modernisation and technological advance” are not adequately specified; and that “social Westernisation” is inadequately defined and not a requirement of demographic transition (c.f. Japan, China).

The demographic transition was thus described as a move from the relative stability of high mortality and high fertility which characterised the ‘traditional’ pattern, to the ‘transitional’ pattern of sustained reduction in mortality followed by a sustained reduction of fertility, but not before the increased population growth rate from the imbalance of mortality and fertility led to population increase, which then stabilised at a higher level, even after fertility declined to replacement rate (or below), which characterised the ‘modern’ pattern. This description was based on the Western European and North American experience and is more descriptive than analytical (Notestein 1953; Coates 1973; Kirk 1996), although the demographic transition (and variants) has been repeated in many populations subsequently.

Figure 1 shows the demographic transition in England from 1540, the population consequences of which were extensively moderated by large outmigration.

The 1901 population would have been around 50–60 million without emigration during the 19th century.

Variants of the demographic transition include:

- fertility limitations in certain traditional societies by extended periods of post-partum sexual abstinence or prolonged lactation that moderates population growth (some remote Melanesian sub-populations)
- fertility increases early in the transition in association with modernisation and mortality decline—because of relaxation in sexual mores and decline in breast feeding—that produces population growth that is particularly rapid (e.g. in Solomon Islands and Papua New Guinea)
- simultaneous (and slow) declines in mortality and fertility leading to lesser population increase (e.g. France)
- lack of significant population growth because of extensive out-migration, despite significant mortality decline and high levels of fertility (some Pacific Island states, especially in Polynesia, affected by significant out-migration)
- rapid fertility decline due to policy interventions of governments and modern methods of birth control that limit population growth (e.g. China’s one child policy).

Demographic transition theory provides an explanation of why population growth occurs during transition—because of the dislocation in time and extent between the mortality decline and the later fertility decline—and provides a cogent basis for explaining the variants. However, it does not explain the reasons for the mortality decline, especially in terms of age/sex characteristics and specific causes of death that are a consequence of morbidities and the proximate and ultimate determinants. Neither does it explain the specific reasons for the fertility decline, especially in the era before effective and acceptable contraception, beyond generalised attributions to modernisation, technology and cultural change.

Epidemiological transition

In 1971 Orman described the epidemiological transition (Orman 1971) in an influential article to explain the reasons for the reduction in mortality—the driving force of the demographic transition—by examination of changes in the major causes of death, and the morbidity they imply. He posited, *inter alia*, three “Ages” of the epidemiological transition: “Pestilence and Famine” (life expectancy 20–40 years); “Receding Pandemics” (life expectancy 30–50 years); and “Degenerative and Man-Made disease” (life expectancy over 50 years). Orman’s synthesis was, to a large extent, concerned with mortality decline before reaching a life expectancy of 50 years, and his consideration of the “Degenerative and Man-Made diseases” was uninformed by modern concepts of causality and the spectacular declines in premature mortality from these conditions, which occurred after 1970 in many populations (Orman 1971). The paper is largely based on England and Wales, Japan and Chile, a rather restrictive sample, no doubt affected by data availability. The anachronistic term “degenerative” is employed, not now used in modern textbooks of medicine to describe these diseases, implying as it does an inevitable and irreversible age-related decline in bodily functions without specific preventable causes.² Further, the designation of some diseases as “man-made” implies that previous and current diseases caused by under-nutrition or infection are not a consequence, in substantial part, of human agency.

Figure 2 summarises Orman’s propositions and provides a brief commentary. Besides the introduction of the term “Epidemiologic Transition”, the article places the understanding of the causes of mortality reduction firmly at the forefront of understanding of the demographic transition. An additional fourth “Age” of the epidemiological transition was described by Olshansky and Ault (1986) as “delayed degenerative death” to accommodate the observation of significant extension of life expectancy from the decline in premature cardiovascular mortality (and other causes) in high income countries. This article took into the consideration the importance of locating cause of death by age (and sex), although was unable to relinquish the term “degenerative”.

There is a fundamental difference between: (1) epidemics (over decades) of mortality from cardiovascular disease, certain cancers (lung, breast, colorectal) and injuries (especially motor vehicle accidents) which limit increases or reduce life expectancy, through premature adult mortality; and (2) the consequences of population ageing (with increases in proportions in older age groups) from previous reductions in fertility and premature mortality and population increase, which leads to higher deaths and death rates (not age adjusted) from these causes, but is associated with high and rising life expectancy (“delayed degenerative death”).

The first scenario is a consequence of epidemiological change, namely increases in specific NCD and injury incidence and mortality rates in young and middle aged adults, affecting demographic parameters, and producing increasing all-cause premature adult mortality and consequent stagnant or declining life expectancy. Life expectancy may plateau as continued declines in child mortality from declining infectious disease and under-nutrition are balanced by increasing premature adult mortality from NCD and injury. This situation indicates serious public health problems and the need for urgent preventive and treatment interventions.

The second scenario is a result of demographic change, ageing of the population—as a consequence of lower previous and current childhood and premature adult mortality, and reduced fertility—and population increase, producing a situation where most deaths occur in the elderly and are a consequence of NCD. This scenario is characterised by high and increasing life expectancy, and indicates no serious population health problems, but rather the need for appropriate health and medical care of the elderly.

The confusion arises between the epidemiological (phase 3) and demographic (phase 4) stages of the

2 ‘The term ‘Degenerative’ is not to be found in the index of *Harrisons’ Principles of Internal Medicine* (15th Edition) (Braunwald *et al.* 2001), and in *Cecil Textbook of Medicine* (22nd Edition) (Goldman, Ausiello 2004) is mentioned in the index once as ‘Degenerative Joint Disease’, but the reader is referred to ‘Osteoarthritis’.

epidemiological transition because cause-of-death data, including such data from Pacific Island states, are so often presented as a proportion of all deaths for all ages (and both sexes) combined, whereas age-specific mortality by cause, or years of life lost (YLL) by cause, would differentiate between these very different situations. The epidemiological transition is often naively stated as a change from under-nutrition and infection (especially in children) as major causes of mortality (and morbidity), to a situation where NCD and injuries (especially in adults) are the major causes of morbidity and mortality, without making this crucial distinction based on age of death and effects on trends in life expectancy. Complicating the issue is that both can occur together; but it is important to distinguish how much of the increase in NCD and deaths is due to demographic factors (population increase and ageing) and how much is a consequence of epidemiological factors (increases in age-specific incidence and death rates), because the responses are different.

The double burden of disease

The term the ‘double burden of disease’ appears to have been used from the late 1990s following the first Global Burden of Disease study based on 1990 data (GBD I, GBD II 1996; Murray & Lopez 1997 a, b, c). This study showed that some world regions or large countries (India, China) manifested excess mortality from both the pre-transitional causes of mortality (perinatal and maternal causes, under-nutrition and communicable disease or Group I conditions), and also from non-communicable disease (Group II conditions), and injuries (Group III conditions). The discourse on the ‘double burden of disease’ intensified following the 2004 World Health Assembly pronouncements on ‘diet, physical activity and health’ issues affecting developing countries (Marshall 2004).

The ‘double burden of disease’ can be manifest in populations in several ways. Certainly, there are well described differences between urban and rural areas with respect to the progress of the demographic and epidemiological transitions which can lead to heterogeneity in major causes of premature death (van der Sande, Ceesay & Milligan et al. 2001). However, there is also heterogeneity in these transitions within the same geographic area by socio-economic class. The urban poor eking out a living on the street are in earlier stages of the transitions than the wealthier inhabitants of the high rise apartments looking down upon them; likewise, rural landless peasants are in a much more fragile position than landowners surveying their holdings from the verandas of their haciendas. Further, the ‘double burden of disease’ can occur within the same family, with infants and children suffering under-nutrition and communicable disease, whilst their parents are obese with diabetes and cardiovascular disease. Within the framework of the epidemiological transition, the ‘double burden of disease’ is merely different stages of the epidemiological transition occurring in groups which differ in their ecological situations because of geographic, socio-economic, age, sex, ethnic or other characteristics.

Pacific Island states which show both considerable proportional mortality from infection and cardiovascular disease can be considered to exhibit the ‘double burden of disease’ (Figure 3).

Non-communicable disease as part of the epidemiological transition

Non-communicable diseases (NCDs) are usually regarded as a constellation of:

- chronic non-infectious cardiovascular, metabolic and respiratory conditions, and certain cancers affecting adults, and some of their biological risk factors: coronary heart disease, hypertension and stroke
- diabetes mellitus (adult onset type) and obesity
- chronic bronchitis, emphysema and chronic obstructive pulmonary disease
- cancer of the lung, colon, breast and others.

These are often also referred to as ‘diseases of affluence’ or ‘western diseases’ or ‘chronic degenerative diseases’ or ‘diseases of urbanisation’ or ‘diseases of modernisation’. All these epithets are equally wrong and uninformative. NCDs are a consequence of specific human behaviours, which derive from societal and environmental circumstances, interacting with individual susceptibility. They are not inevitable and not irreversible.

The descriptive epidemiology of the first epidemic of NCDs is instructive: it increased and decreased in many western industrialised countries during the 20th century and exerted a significant population effect on premature mortality and life expectancy in many populations; much lower rates were seen in some migrants and sub-populations (such as vegetarians) in western countries, and low rates and minor changes were observed in Mediterranean countries and Japan (not western, but industrialised); the epidemic started in the upper social strata before World War II and had moved to the lower social strata by the later 20th century. It began to

wane when knowledge of causality became available from the mid 1960s. NCD mortality declined, in concert with a decline in population risk factors (especially cardiovascular disease and lung cancer). Information on causality of cardiovascular disease derived from both ecological studies, particularly the Seven Countries study (Keys 1980; Menotti, Blackburn, Kromhout & Keys et al. 1993, 1997, 1999), and cohort studies, particularly in Framingham, Massachusetts. (Wilson 1994).

The first populations to be affected by the epidemiological transition, with real increases in NCD (from the 1920s) were countries of Western Europe, North America and Australasia (the 'first world'), with peaks of cardiovascular disease (CVD) around 1970–80 (Figure 4). In Australia, there were plateaux in life expectancy increases in males (1945–70) and females (1960–70) due to epidemics of CVD, followed by continuous increases in life expectancy as age-specific cardiovascular disease mortality substantially declined (Figure 5), although the proportion of deaths from CVD remained considerable from population ageing. The epidemiological effect of the CVD epidemic also occurred in several other countries, including the USA. The epidemiological transition in these countries commenced after World War I during the reduction in international trade and the economic 'de-globalisation' of the 1930s, following the previous peak of colonial globalisation around 1900. Furthermore, these countries experienced the 'double burden' of infectious disease (although declining), and the new epidemics of chronic adult NCD before 1950.

The second group of countries to be affected by the NCD stage of the epidemiological transition were Russia and other republics of the former USSR, and Eastern European countries (the 'second world'), in which increases in NCD occurred mostly after 1945. NCD mortality peaked for most of Eastern Europe in the 1990s, but Russia and some former USSR Republics experienced increasing CVD death rates into the 21st century to levels higher than ever previously observed (Figure 4). Again, there is evidence of the double burden of disease, not only after 1945, as infectious disease fell and NCD rose, but also after 1990, when the collapse in health services and intravenous drug use led to increases in tuberculosis and HIV/AIDS, especially in Russia.

The third group of populations affected by NCD in the epidemiological transition are the diverse countries of what used to be termed the 'third world', which are at various levels of socio-economic development and demonstrate significant secular heterogeneity in the demographic and epidemiological transitions between each other and within their populations. This is certainly the situation for the varied Pacific Island states. However, lack of accurate cause of death data by age and sex preclude detailed analysis of mortality trends in most Pacific Island states; it has been possible to obtain data only for all age proportional mortality.

There are different paths from high mortality characterised by the traditional pattern of under-nutrition and infection, especially affecting children (Figure 6). The 'best' route is directly from high to low mortality from all causes, as illustrated by Southern European countries (such as Greece) and Japan. However, many populations experience an epidemic of NCD in adults, which slows or reverses the increase in life expectancy because of persistent or increasing adult mortality; when this is overcome, life expectancy continues to increase. The 'worst' route is from high mortality from infection and under-nutrition (especially in children) to high premature mortality from NCD and injury (in adults), with very little change in the low life expectancy. This situation may occur in indigenous minorities in developed countries (such as Australian Aborigines [Vos, Barker & Begg et al. 2007, 2009]), and is sometimes (mistakenly) called a 'third world' situation, although the patterns of age and cause-specific mortality are entirely different from those producing low life expectancy in least developed countries.

These complex changes in particular causes of death are a result of changes in causal exposures. Although increases in exposures to risk factors for chronic NCD can be associated with urbanisation and globalisation, epidemics of NCDs commenced well before the present episode of globalisation, and decreases in NCD have occurred in many populations without de-urbanisation. The celebrated epidemic of coronary heart disease (CHD) in Finland was worse among rural dairy farmers than among the more urbanised population (Jousilahti, Vartiainen & Tuomilehto et al. 1998), and CHD is higher in rural Australia than in urban areas (Burnley 1998). Luckily, NCDs have discoverable particular causes that can be controlled in populations, producing significant reductions in premature mortality, without changing most aspects of societal organisation. These causes are not the 'inevitable price of affluence' as was once thought. Since there has been significant regression of these conditions in countries first affected by them, with others little affected, they are also not inevitable manifestations of 'westernisation' or 'civilisation' or 'industrialisation', nor do they require reversal of these

situations for their prevention and control. Rather, prevention and control of morbidity and mortality from NCD requires attention to specific details of diet, exercise and provision of medical services. This is not dissimilar to the reversal of morbidity and mortality from infectious disease and under-nutrition as a consequence of the disastrous health effects of human aggregation in cities prior to the sanitary revolution, which were rectified by attention to specific details, not de-urbanisation. In fact, urbanisation can make reticulation of potable water, sewage disposal, food distribution, and supply of health and education services easier. Likewise, chronic NCD in adults can be controlled by changes in population risk factors, which are often easier to alter in cosmopolitan urban society than in rural areas.

Complete explanations for differentials in CHD mortality between populations and for the secular declines in CHD mortality in countries where this has occurred have proved somewhat elusive, despite the extensive evidence for the role of behavioural and biological risk factors in the CHD epidemic from various studies. However, using risk reduction based on declines in classical risk factors in Australia (1968–2000) (Taylor, Dobson & Mirzaei 2006) and New Zealand (1980–2004) (Tobias, Taylor & Yeh et al. 2008), most of the CHD mortality decline (78% Australia; 80% New Zealand) is explicable on the basis of reductions in population levels of these three traditional risk factors (Figures 7 and 8). The reduction in CVD mortality in Australia and New Zealand, and other many other countries, has occurred while population obesity levels increased.

Transitions in Pacific Island populations

The demographic and epidemiological transition in Pacific Island populations has been noted for some time.

Emergence of non-communicable disease in Pacific Island populations

By the 1970s, NCDs, such as cardiovascular disease and diabetes, were an evident cause of significant morbidity and mortality in adults in many Pacific Island populations. This was a result of a real increase in these diseases, as well as the decline in infectious diseases and under-nutrition as important health issues. Numerous studies showed NCDs to be greater problems in modernised and urban areas, and less important in rural areas or outer islands, where there was a more traditional way of life, and also less common in Melanesian malarious countries. Studies to 1984 were summarised by the South Pacific Commission (SPC) (Coyne 1984) under the rubric of “urbanisation and Western diet”, and these were updated to 2000 (Coyne 2000) by SPC (now called the Secretariat of the Pacific Community) with a name change to “lifestyle diseases”, and containing 529 references. The studies note that the prevalence of obesity, diabetes and hypertension in some Pacific Island populations exceeds rates reported from western countries, and in some populations are the “highest in the world” or “among the highest in the world”.

In Fiji, for example, trends hospital admissions revealed an increase (from the 1970s) in the number of patients admitted to hospital with CVDs with risk factors for these conditions (Pathik, Ram 1974; Reed, 1983; Tuomhelito et al. 1984). The rise of CVD prompted a national survey of risk factors in 1980 (Ram et al. 1983; Tuomhelito et al. 1984) which showed significant prevalences of hypertension, diabetes, tobacco smoking and obesity. Cigarette sales in Fiji rose 273% from 1956 to 1984, while the population increase was 88% (Tuomhelito et al. 1984). Circulatory disease mortality rose from 20% around 1960 to 40% in 2000, while life expectancy plateaued from the mid 1980s (from published sources).

In the phosphate rich island of Nauru, infection was a major cause of death in the 1940s and 1950s, but decreased significantly thereafter. Cardiovascular disease and diabetes increased from a small proportion of deaths to 20–30%, following independence in 1970, and this trend has continued. External causes (mostly road accidents in males), increased from less than 10% before 1970, to peak at 24% in the mid-1980s, then declined to 10% from 1990. Life expectancy remains low into the 21st century (from published sources). While under-nutrition was noted during and before World War II (Taylor & Thoma 1983), a change in diet to reliance on imported foods (especially rice) was reported in the Nauruan population from the 1950s, and a weight reduction clinic opened in 1965 (Taylor & Thoma 1983).

Mortality in relation to economic and social development in Pacific Island states

Accurate estimates of mortality in many Pacific Island states are not easy to obtain, and this has been discussed in some detail (Taylor & Lopez 2007; Taylor, Bampton & Lopez 2005). The most recent 'best estimates' in life expectancy and infant mortality are given in Table 1.

There is a relation between life expectancy (and infant mortality) and Gross Domestic Product (GDP) per capita around 2000 (Taylor 2008), with exceptions, as there was around 1980 (Taylor, Lewis & Sladden 1991) (Figure 9). This conforms to well known relationships among world countries, and shows that the most developed countries (in terms of GDP per capita) have the best health in terms of life expectancy, despite a high proportion of deaths from NCD (but mostly in the elderly). However, there is a band between Aus\$1000-1,300 GDP per capita where there is quite a large variation in life expectancy, indicating that factors apart from GDP per capita must be invoked to explain differences (i.e. social development). Furthermore, when the relation of GDP per capita to life expectancy is compared between 1980 and 2000, the relationship is seen to have moved upwards. This phenomenon, attributed to social development (including health services, education, income distribution, water and sanitation, etc.), was first described by Preston in 1975 (Preston 1975).

Plateaux in life expectancy in Pacific Island states

In several Pacific Island states, plateaux in life expectancy have been observed in the last two decades of the 20th century and into the new millennium, especially in males (Figure 10), in the face of continued declines in child mortality. This has often been referred to as 'stagnation' in mortality decline, usually a consequence of persistent or increasing adult mortality, implying significant premature mortality from NCD and injury.

Nevertheless, some of the more developed Pacific Island states appear to have enjoyed improving life expectancy over the period since 1980, despite significant proportional mortality from NCD, implying a reduction in premature death rates from these causes, and a movement of NCD mortality to the elderly (Figure 10).

Morbidity, obesity and nutrition

The linkages between nutrition, obesity and morbidity (which can progress to mortality) are biological, complex, statistical and not inevitable because of varying individual susceptibility. There are pre-determining social, economic and environmental factors affecting populations that influence food supply and food intake, and other factors, such as exercise, that influence obesity. Furthermore, risk factors for cardiovascular diseases, such as coronary heart disease and stroke, can be direct, from specific components of the diet (such as saturated fat or salt intake), or via obesity and then through diabetes mellitus (type II) and/or hypertension, and are modulated by individual susceptibility. The relationships are indicated below.

The relationships between hypertension and smoking, and coronary heart disease events and mortality have been demonstrated in a large Asia Pacific cohort studies, with evidence of interaction for haemorrhagic stroke (Nakamura, Barzi & Lam et al. 2008). In the same group of cohort studies, hypertension was found to account for a significant fraction of ischaemic heart disease and stroke mortality (Martiniuk, Lee & Lawes et al. 2007).

The human ecological proposition

It has become customary to frame the advent of NCD in populations, using a human ecological approach that relates disease to a way of life, depending on the means of subsistence. Such an approach traces the evolution of human subsistence from gatherer-hunter, to peasant agriculturalist, to a modern mechanised society reliant on purchased food (including modern farmers) and requiring little manual labour. 'Westernisation' of diet and lifestyle with consequent change in disease prevalence has been noted for many decades in Asia, Africa and Pacific Islands (Trowell & Burkitt 1981; Coyne 1984), and this process has been recently re-encapsulated within a paradigm termed the 'Nutrition Transition' (Popkin 2004). This recent approach emphasises: the speed of change in diet, physical activity and consequent obesity; the earlier stages in social and economic development in which these changes are seen to occur; the possible inter-ethnic differences in obesity-disease relationships; and the shift of the burden of disease from these causes to lower socio-economic groups.

The ecological approach has also been extended into propositions that *homo sapiens* is mostly biologically adapted as a gatherer-hunter and that inherited biological traits which derive from this become detrimental when the method of subsistence, and hence diet and exercise, changes substantially. Evolutionary determined genetic constitution, which changes very slowly over time in response to pressure of natural selection, has been invoked to explain susceptibility to obesity and diabetes (Nell 1962), and salt sensitivity and hypertension (Lev-Ran & Porta 2005) in ethnic groups who are closer in time to a state of subsistence that was characterised by extensive physical activity and an irregular and limited food supply. There may also be inherited traits for taste preference for salt and energy dense foods (sweet, fat) that may be maladaptive when these are all in plentiful supply. While these propositions provide a framework for understanding these phenomena, they are somewhat speculative; discussions of them often generate more heat than light, and they do not have a great bearing on prevention and control in populations.

Cultural adaption to the environment is related strongly the method of subsistence; food exchange, reciprocity of giving and receiving, infrequent feasts on important occasions, the use of food for hospitality, elaboration of cuisine, attitudes to obesity and exercise, etc. are all strongly related to culture. These cultural attitudes are transmitted across generations. In a context where extensive physical labour is required to produce food or to buy it, a high caloric intake is required in the face of high energy expenditure. Fatness occurs in those who are able to obtain food without manual labour, and it is often seen as a mark of wealth and power, and as healthy and attractive compared to the scrawny underfed. With modernisation, reduction in the requirement for physical exercise means that high caloric intake is no longer required and, with increases in the affordable food supply, feasts can be held weekly, if not daily, usually consisting of energy-dense food and drink. These changes have affected populations in many countries through time, and such changes continue to occur, including in sub-populations in developed countries.

Culture is, however, much quicker and easier to change, especially when it becomes maladaptive, than genetic make-up. While it is generally accepted that the most important change leading to obesity in human societies is reduction in energy expenditure, it is also generally accepted that probably the most important intervention is reduction in energy intake. This does not mean that exercise and energy expenditure should be encouraged and facilities provided, but that there is no longer a need for the manual labour and energy expenditure for transport of past eras, and there are just not enough hours in the day for sufficient exercise as 'sport' and 'recreation', except in professional athletes or those with independent means.

Obesity

There are measurement issues related to obesity which cannot be totally ignored. Although body fat can be precisely measured by sophisticated equipment in a metabolic laboratory, in clinical practice and field surveys reliance must be put on weight and height, usually summarised by the body mass index (BMI): $\text{weight} / (\text{height})^2$. However, subjects can be heavy for their height because of muscularity and large frame size rather than obesity, and some with 'normal' weight for height can be obese with small frame size. Some of these anomalies can be distinguished by waist hip ratio (abdominal obesity) and skin fold thickness (subcutaneous fat, frequently measured on the upper arm). There are obvious frame size differences between various ethnicities and these may be a combination of genetic differences and acquired factors, especially nutrition in childhood. Nevertheless, height and weight of adults provide sufficient information for individual and population interventions, but inter-ethnic comparisons using BMI need to be carefully considered, and obesity may occur at higher BMI in some Pacific populations than in Caucasian or Asian populations.

Obesity is a consequence of the balance of energy intake with energy expenditure, although moderated by individual and group susceptibilities. It is suggested that certain ethnicities are more susceptible to obesity than others, and some support the "thrifty genotype" proposition of Neel (1962). Obesity may result in elevated blood pressure and hypertension, and elevated blood glucose and diabetes (type II). Many studies demonstrate that much of the effect of obesity in CVD is mediated by these two effects. Further, the energy intake contributing to obesity may consist of energy-dense saturated (animal) fat which contributes independently to heart disease and stroke, whereas high caloric intake from other sources would not carry such a risk. Furthermore, some obese people are also very physically active, and this would exert independent protective effects for diabetes, hypertension and CVD.

The direct relationship between obesity and risk of mortality summarises risk across the distribution of intermediaries (such as hypertension and diabetes). The excess mortality risk from overweight or obesity (≥ 25 BMI) in a series of cohort studies from Asia-Pacific were 17% for death from ischaemic heart disease, 19% for haemorrhagic stroke and 5% for ischaemic stroke (Asia-Pacific cohort studies collaboration 2007), which accounted for around 1%–10% of mortality from each of these causes in the various countries. Most of the subjects involved in these studies were Asian.

Morbidity, obesity and nutrition in Pacific Island countries

As previously mentioned, extensive SPC reviews by Coyne (1984, 2000) have documented the very large numbers of studies on NCD morbidity and mortality in Pacific Island populations and their risk factors to 2000. Since then, there have been several WHO-sponsored STEP surveys of NCD and risk factors in Pacific populations, inter alia, American Samoa, Federated States of Micronesia and Kiribati (FSM STEPS 2008; American Samoa STEPS 2007; Kiribati STEPS 2009). These have all re-enforced evidence from previous studies that indicate significant population prevalences of tobacco smoking, hypertension, diabetes, obesity, elevated serum cholesterol and other risk factors in these populations (Figure 11). However, the STEP surveys are cross-sectional and there is little comparison with previous studies, which in any case is rendered difficult because of changes in diagnostic categories (especially for diabetes). Furthermore, with cut-offs set rather low for risk factors, prevalences of 'abnormalities' are high, and combinations of risk factors indicate the proportion of people at 'low risk' of cardiovascular disease to be 0.1% in Kiribati, 0.4% in American Samoa, and 1% in Federated states of Micronesia (age 25–64 years, both sexes) (FSM STEPS 2008; American Samoa STEPS 2007; Kiribati STEPS 2009).

A series of dietary intake surveys in Fiji, Vanuatu and Kiribati in the 1980s demonstrated that urban subjects were more obese, had higher prevalence rates of diabetes and hypertension, higher salt intake and generally higher serum cholesterol, than their rural counterparts, despite a lower overall caloric intake, indicating the impact of physical exercise, as well as dietary differences, on cardiovascular risk factors (Taylor, Badcock & King et al. 1992) (Figure 12). Physical inactivity was shown to be an independent risk factor for diabetes in prevalence studies in Fiji (Taylor, Ram & Zimmet et al. 1984); this was subsequently confirmed elsewhere in cohort studies.

Compared with the large number of cross-sectional prevalence studies, there are few cohort studies of risk factors in relation to mortality and cause of death in Pacific populations. In Fiji, classical CVD risk factors were related to CVD mortality and all-cause mortality, but obesity had no independent contribution (Collins, Dowse & Cabealawa et al. 1996). In Samoa, hypertension most strongly correlated with coronary heart disease occurrence rather than other prevalent risk factors, including obesity (Wahi, Gatzka & Sherrard et al. 1997). Obesity was not correlated with mortality in studies of Nauruans, nor in Melanesians or Indo-Fijians (Allison, Hodge & Dowse et al. 1996). However, analyses from the Framingham study did find a correlation between relative weight (obesity) and CHD and sudden death, and found an independent contribution from obesity, apart from other risk factors (Hubert, Feinleib & McNamara et al. 1983). Excess mortality risk from overweight or obesity (≥ 25 BMI) was found in aggregated cohort studies from Asia-Pacific for death from ischaemic heart disease and stroke (Asia-Pacific cohort studies collaboration 2007). The evidence is somewhat inconsistent, but obesity remains an easily observable marker for a collection of risk factors for CVD and mortality.

Response to non-communicable disease

The 'Prevention Paradox'

Central to the control of NCD in populations is the 'Prevention Paradox' first proposed by Rose in: 'Sick individuals and sick populations' (Rose 1985, 1992). The 'Prevention Paradox' describes the fact that most disease and mortality in populations comes from those at moderate risk, not those at high risk, since there are many fewer people at high risk than at moderate risk. This applies to diseases where risk of disease (and mortality) is related continuously to the level of a risk factor, e.g. the risk of stroke from blood pressure, the risk of cardiovascular mortality from blood glucose, the risk of coronary heart disease from serum cholesterol, but also the risk of mortality from vitamin A deficiency, or the risk of mental retardation from iodine deficiency or complications from under-weight in children, or the risk of mortality from alcohol consumption. This appears as a 'paradox' to some, because it implies that disease in populations cannot be controlled by only or mainly

directing efforts to those at high risk. The corollary is that prevention and control depend on moving the entire population distribution of the risk factor (approximated by the mean value) to lower levels (Figure 13).

Prevention and control of NCD

The population approach to NCD control involves moving distributions of risk factors to lower levels, while the high risk approach involves identifying and treating those at high risk. The ‘prevention paradox’ indicates that most disease and mortality emanates from those at moderate risk (rather than high risk) since there are more of them. Population adaptation to a plentiful food supply, reductions in occupational and transport physical exercise, and tobacco availability are demonstrably possible. The mass approach to population prevention has many advantages over the high risk approach, especially in terms of effectiveness, changing determinants of risk factors and de-medicalising the process. But while primary health care for NCD and risk factors can be simple and inexpensive, services are often over-stretched as it is and interventions are often pharmacological.

The inter-related risk factors for NCD mean that any sensible policy for primary prevention needs to be integrated. Diseases such as CHD, stroke, diabetes (type II), chronic obstructive lung disease, lung cancer, other cancers (including colon cancer) have overlapping behavioural risk factors. These include diet (saturated fat, calories, salt), exercise and tobacco smoking, and they require overlapping structural changes (price, regulation, facilities) and health promotion campaigns, as well as regular monitoring of population risk factors and outcomes (incidence, mortality). This mass or population approach to primary prevention can be supplemented and complemented by an individual high risk approach for those already with NCD (individual secondary prevention), and for those at high risk without yet being affected by NCD (individual primary prevention).

Programs for prevention of NCD need to build on successful efforts in countries where CHD, stroke, chronic obstructive lung disease and lung cancer have declined. This requires that the reasons for declines need to be understood, especially the relative roles of prevention and treatment. These reasons need to encompass why behaviour changed, including the role of government, non-government organisations and the private sector. However, lessons may not necessarily be readily transferable to other cultures or economies (e.g. NGOs to China, Finnish programs to other market economies).

The response to epidemics of NCD (especially CVD and diabetes) is problematic, because the mass approach to primary prevention (and much secondary prevention) involves not only actions by health departments, but also active independent contributions from non-governmental organisations, universities and professional associations, sophisticated multi-sectoral health promotion strategies, and structural changes in marketing and advertising potentially health-damaging products.

Governments and their health departments are seriously handicapped in their control of NCD by an understandable reluctance to act to change individual behaviours that lack obvious direct effects on others (unlike infectious diseases). Governments are wont to ascribe consumption behaviour related to diet, alcohol and tobacco, and participation in activities involving physical exertion, solely to individual ‘choice’, which is the traditional market economic view. Furthermore, there is a reluctance of government to intervene in markets through price manipulation of healthy and unhealthy products because of prevailing neo-liberal economic orthodoxy and policies of international and global agencies that implement these, particularly the World Bank (WB), the International Monetary Fund (IMF) and the World Trade Organisation (WTO) (Hughes & Lawrence 2005). In addition, governments are subject to lobbying and influence by their own producers of unhealthy products for consumption —such as farmers of tobacco, beef and dairy produce —and large national and transnational corporations that manufacture and market these products. Nevertheless, there have been successes in many countries and these can be emulated.

Challenges to NCD control in populations

There are considerable and continuing challenges to NCD control in populations.

- **individualism:** NCDs are seen as due only to (wrong) individual choices: ‘gluttony’ and ‘laziness’, which is to put insufficient stress on collective and structural determinants and actions
- **medicalisation:** a focus on detection and treatment of cases (secondary or tertiary prevention) or individualised primary prevention, consisting of screening and treatment of biological risk factors in those at high risk, which do not address those at moderate risk, nor the mass changes in way of life required

- food industries and their influence on government and international agencies, which leads to resistance to changes towards healthier diets and imposition of advertising restrictions
- the particular type of economic globalisation that is prevalent and is administered through agencies such as the WTO restricts countries' ability to regulate food imports and trade (Hughes & Lawrence 2005)
- pharmaceutical industry funding for research that focuses on individualised treatment or prevention using pharmaceutical means, and less research funding for non-pharmaceutical interventions
- reluctance of governments to intervene in choices and habits considered to be the province of the individual for diseases that are non-transmissible, which raises questions of individual liberty without consideration of appropriate societal responses under communitarianism (where medical expenses are partly or mainly the responsibility of all)
- lack of compelling evidence to explain declines in NCD mortality and the effectiveness of prevention due to difficulties of scientific studies in whole populations
- prevalent economic paradigms at national and international level that prevent price and import manipulation to foster availability of cheap, healthy food, often locally produced
- lack of recognition of sedentary work as an occupational hazard, and the view that exercise is only recreation.

Conclusions

- There is evidence of stagnation in mortality levels in adults in some Pacific Island countries, which indicates a stage in the Epidemiological Transition where chronic NCD in adults may cause sufficient premature mortality that it limits improvements in life expectancy.
- NCD is a consequence of specific and reversible aspects of diet (animal fat, salt, calories), physical exercise and tobacco smoking interacting with individual and group susceptibility and not inevitably or irreversibly associated with 'urbanisation', 'westernisation', 'modernisation', 'globalisation', 'development', 'affluence' or similar influences.
- Obesity is a consequence of excess energy intake over expenditure, moderated by individual and group susceptibility. Most of the adverse effects of obesity are through hypertension and diabetes and evidence for direct effects of obesity are inconsistent.
- Dramatic reductions in premature mortality from NCD mortality occurred over the last 30–40 years in many countries, including Australia and New Zealand, and most of the decline is explicable on the basis of reductions in population risk factors.
- NCD emerged in many Pacific Island countries in the last quarter of the 20th century and studies indicate considerable prevalences of hypertension, diabetes, obesity, tobacco smoking and elevated serum cholesterol in many Pacific populations. In some populations, consequent premature cardiovascular mortality is probably responsible for limitations on life expectancy.
- The population approach to NCD control involves moving distributions of risk factors to lower levels, while the high risk approach involves identifying and treating those at high risk. The 'prevention paradox' indicates that most disease and mortality emanates from those at moderate risk (rather than high risk), since there are more of them.
- NCD prevention and control need to be culturally congruent, yet need to change specific aspects of culture related to diet, exercise, and tobacco and alcohol consumption. Health promotion and structural changes are both required.
- Difficulties and challenges should not be under-estimated, but there are examples of success.

Recommendations

General recommendations

1. Focus on the population or mass approach for prevention of NCD rather than individual screening.
2. Both intensive health promotion and structural changes (multi-sectoral) are needed to change diet, tobacco smoking and physical exercise.
3. Strong involvement by NGOs, universities and professional groups is needed to drive change.
4. Understand and use what has been successful in other populations, after adaptation to local implementation.
5. Monitor activities and results (NCD risk factors and mortality).

Specific recommendations

1. Health promotion to induce behavioural change

- intensive and continuing health promotion
- based on local research to consider locally relevant social, economic, geographic and cultural factors
- implemented through the mass media (electronic, print) and
- through various settings: schools, workplaces, community organisations
- which are regularly evaluated and modified
- and address major risk factors for NCD: tobacco, diet, physical exercise, alcohol in target age and sex groups.

2. Structural changes involving:

- regulation of advertising of unhealthy products, especially tobacco, alcohol and unhealthy food products, and restrict sponsorship of events by manufacturers of these products
- regulation of food composition by reducing salt levels, eliminating industrially produced trans-fatty acids, decreasing saturated fats and limiting free sugars
- support of local agriculture, animal husbandry and fisheries, and the production and marketing of locally produced food
- taxation of unhealthy products to control consumption and to fund health promotion and to support production and marketing of local primary produce
- provision of low cost or free exercise and sporting facilities to all sex/age groups with diversion of funds from elite sport if necessary
- regulation of sale and consumption of alcohol.

3. Monitoring

- Monitor implementation of programs
- Monitor population risk factors by using abbreviated STEPS surveys biennially
- Monitor cause of death data by age and sex to assess effects of NCD on population mortality.

4. Establish mechanisms for incorporation of civil society in prevention and control programs for NCD, especially

- NGOs such as the Cancer Council, the Heart Foundation, anti-tobacco and anti alcohol lobbies, etc
- universities, especially public health, community medicine, medical and nursing faculties
- professional groups, especially medical association, nursing and paramedical associations, nutrition and dietetic associations
- Community groups, women's associations, etc.

5. Focus on non-pharmaceutical intervention for patients with NCD or those at high risk, or, if pharmaceuticals are required, use inexpensive pharmaceuticals according to standardised medical management guidelines.

APPENDIX: WHO actions on prevention and control of chronic non-communicable disease

The World Health Organisation produced a *Global Strategy for Prevention and Control of Non-communicable Disease* in 2000; a *Framework Convention on Tobacco Control* in 2003; a *Global Strategy on Diet, Physical Activity and Health* in 2004; a *Resolution on Prevention and Control of Non-communicable Diseases: implementation of the global strategy* in 2007; and an *Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases* in 2008. There are also WHO reports dating back to the 1950s on coronary heart disease, stroke, diabetes, hypertension, obesity and relation to diet and other determinants.

World Health Organisation 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases (2008)

“Working in partnership to prevent and control the four non-communicable diseases: cardiovascular diseases, diabetes, cancers and chronic respiratory diseases and the four shared risk factors: tobacco use, physical inactivity, unhealthy diets and the harmful use of alcohol.”

Objectives of the WHO Global NCD Strategy and critique

Objectives of WHO Global NCD Strategy	Comments
“To raise the priority accorded to non-communicable disease in development work at global and national levels, and to integrate prevention and control of such diseases into policies across all government departments”	<p><i>Assessment of priority requires good data on disease burden by age and distinguishing between premature mortality limiting life expectancy and NCD in the elderly</i></p> <p><i>All of government approaches are desirable but difficult, and impetus usually comes from outside government, not from within</i></p>
“To establish and strengthen national policies and plans for the prevention and control of non-communicable diseases”	<p><i>The effectiveness of national policies and plans need to be evaluated since most action may come from outside of government</i></p> <p><i>National policies and plans may involve protracted negotiations and be a substitute for action rather than a prelude to action</i></p> <p><i>National policies and plans may be captured by industry lobby groups who produce unhealthy products or by the clinical or pharmaceutical lobby who favour individualised approaches</i></p>
“To promote interventions to reduce the main shared modifiable risk factors for non-communicable diseases: tobacco use, unhealthy diets, physical inactivity and harmful use of alcohol”	<i>There are many sensible specific recommendations in this section. The question is: how to implement them within the context of particular countries?</i>
“To promote research for the prevention and control of non-communicable diseases”	<i>Research should be oriented towards population intervention trials or evaluations of interventions or policies, rather than observational studies or intervention trials on individuals.</i>
“To promote partnerships for the prevention and control of non-communicable diseases”	<i>Should come first</i>
“To monitor non-communicable diseases and their determinants and evaluate progress at the national, regional and global levels”	<i>Monitoring is important when based on NCD and risk factors, and evidence of structural interventions, rather than production of policies and plans, and statements of intent</i>

“Addressing Common Risk Factors. Four of the most prominent non-communicable diseases—cardiovascular disease, cancer, chronic obstructive pulmonary disease and diabetes—are linked by common preventable risk factors related to lifestyle. These factors are tobacco use, unhealthy diet and physical inactivity. Action to prevent these diseases should therefore focus on controlling the risk factors in an integrated manner. Intervention at the level of the family and community is essential for prevention because the causal risk factors are deeply

entrenched in the social and cultural framework of the society. Addressing the major risk factors should be given the highest priority in the global strategy for the prevention and control of non-communicable diseases. Continuing surveillance of levels and patterns of risk factors is of fundamental importance to planning and evaluating these preventive activities.”

Lessons Learned

“Much is known about the prevention of non-communicable diseases. Experience clearly shows that they are to a great extent preventable through interventions against the major risk factors and their environmental, economic, social and behavioural determinants in the population.

Countries can reverse the advance of these diseases if appropriate action is taken. Such action may be guided by the lessons learned from existing knowledge and experience, which are summarized below.

Strategies to reduce exposure to established risk factors and to lower the risk for individuals who present clinical signs of further progression of these diseases, even when implemented together, do not achieve the full potential for prevention.

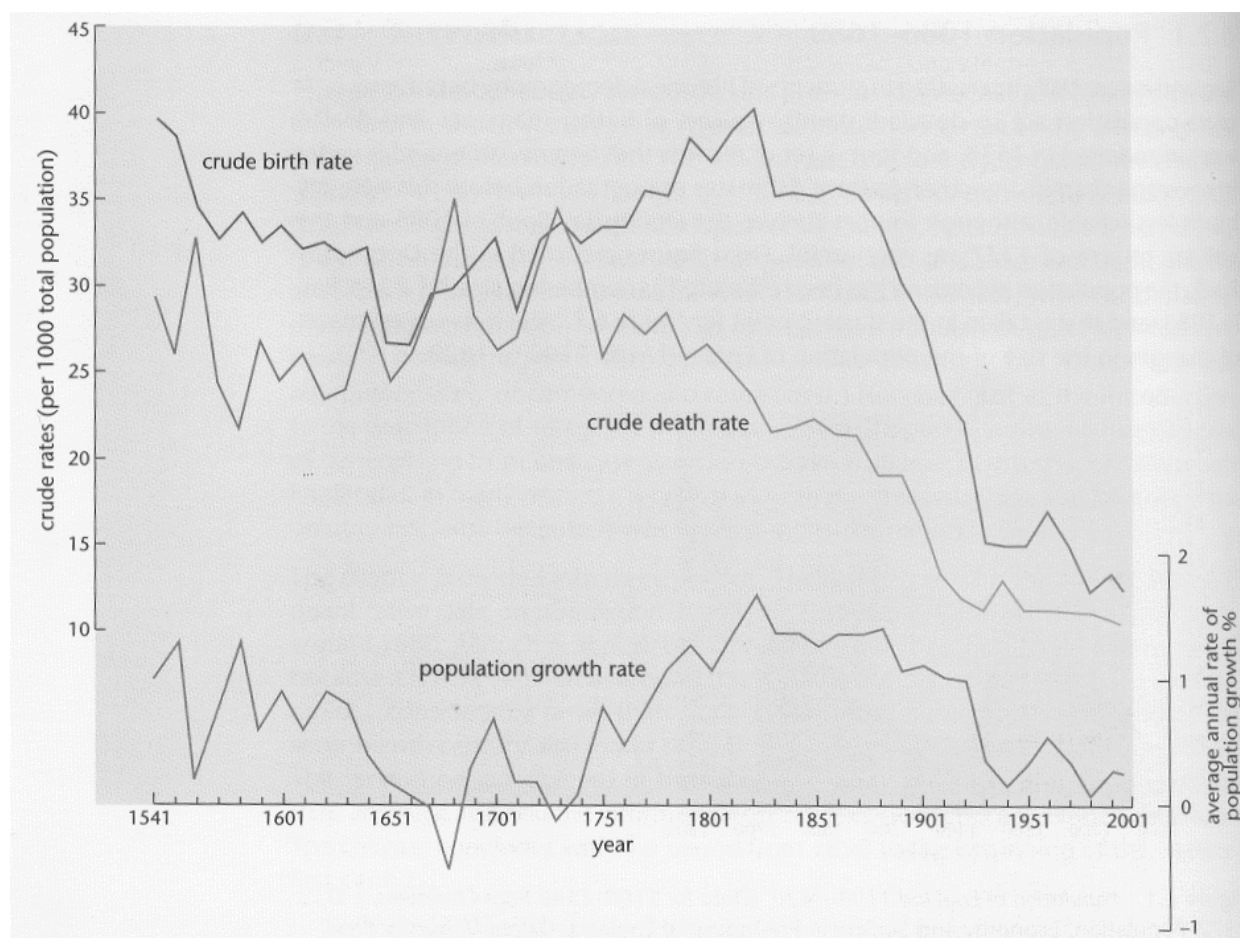
A comprehensive long-term strategy for control of non-communicable diseases must therefore necessarily include prevention of the emergence of risk factors in the first place.

In any population, most people have a moderate level of risk factors, and a minority have a high level. Taken together, those at moderate risk contribute more to the total burden of non-communicable diseases than those at high risk. Consequently, a comprehensive prevention strategy needs to blend synergistically an approach aimed at reducing risk factor levels in the population as a whole with one directed at high-risk individuals.

Review of studies has shown that, for substantial reductions in the levels of risk factors and in disease outcomes, delivery of interventions should be of appropriate intensity and sustained over extended periods of time. However, even modest changes in risk factor levels will have a substantial public health benefit.

Experience indicates that success of community-based interventions requires community participation, supportive policy decisions, inter-sectoral action, appropriate legislation, health care reforms, and collaboration with non-governmental organizations, industry and the private sector. Decisions made outside the health sector often have a major bearing on elements that influence the risk factors. More health gains in terms of prevention are achieved by influencing public policies in domains such as trade, food and pharmaceutical production, agriculture, urban development, and taxation policies than by changes in health policy alone.

The long-term needs of people with non-communicable diseases are rarely dealt with successfully by the present organizational and financial arrangements of health care. Member States need to address the challenge in the context of overall health system reform”.

Figure 1 Birth and death rates and population in England from 1540

Year	1601	1701	1801	1851	1901	1951	2001
Population (million)							
England	4	5	9	18	33	44	52

Figure 2 Propositions by Omran relating to the epidemiological transition

Omran's propositions relating to epidemiologic transition	Comments
<i>"Proposition One: The theory of epidemiologic transition begins with the major premise that mortality is a fundamental factor in population dynamics"</i>	This highlights the importance of mortality decline in the origin of the transition rather than a preoccupation with consequences (population increase) and means to limit this (fertility reduction).
<i>"Proposition Two: During the transition, a long term shift occurs in mortality and disease patterns whereby pandemics of infection are gradually displaced by degenerative and man-made diseases as the chief form of morbidity and primary cause of death.....(1) The Age of Pestilence and Famine; (2) The Age of Receding Pandemics; (3) The Age of Degenerative and Man-Made Diseases"</i>	Although the overall pattern of changes in causes of death is described, it does not include the 4 th <i>Age of Delayed Degenerative Death</i> (Olshansky, Ault 1986) which occurred later. Further, <i>Degenerative</i> is a misleading and anachronistic word, and reference to these diseases as <i>man-made</i> implies a lack of human agency in mortality from infection and under-nutrition.
<i>"Proposition Three: During the epidemiological transition the most profound changes in health and disease patterns obtain among children and young women"</i>	This highlights the importance of mortality reduction in children and young women as to the mortality decline (before life expectancy reaches 50 years), but does not refer to the later reduction in adult mortality in high income countries from moderation in mortality from cardiovascular disease, cancer and injury.
<i>"Proposition Four: The shifts in health and disease patterns that characterise the epidemiologic transition are closely associated with the demographic and socioeconomic transition that constitute the modernisation complex"</i>	While this proposition links the epidemiological transition with the demographic transition and socio-economic development, it mostly covers the early period , but does observe that while social and economic improvements were major drivers of mortality reduction in the now developed countries, modern technology and public health are the major drivers in currently developing countries.
<i>Proposition Five: Peculiar variations in the pattern, the pace, the determinants and the consequences of population change differentiate three basic models of the epidemiologic transition: the classical or western model, the accelerated model and the contemporary or delayed model"</i>	Mortality reduction started in western countries from reduction in child and young female mortality (in particular); so did change in cause of death to cardiovascular and other non-communicable disease ('western model'). The 'accelerated model' describes the rapid changes which occurred in Japan, and the 'delayed model' describes rapid mortality reduction from imported public health and medical measures in developing countries with persistent high fertility and high population growth.

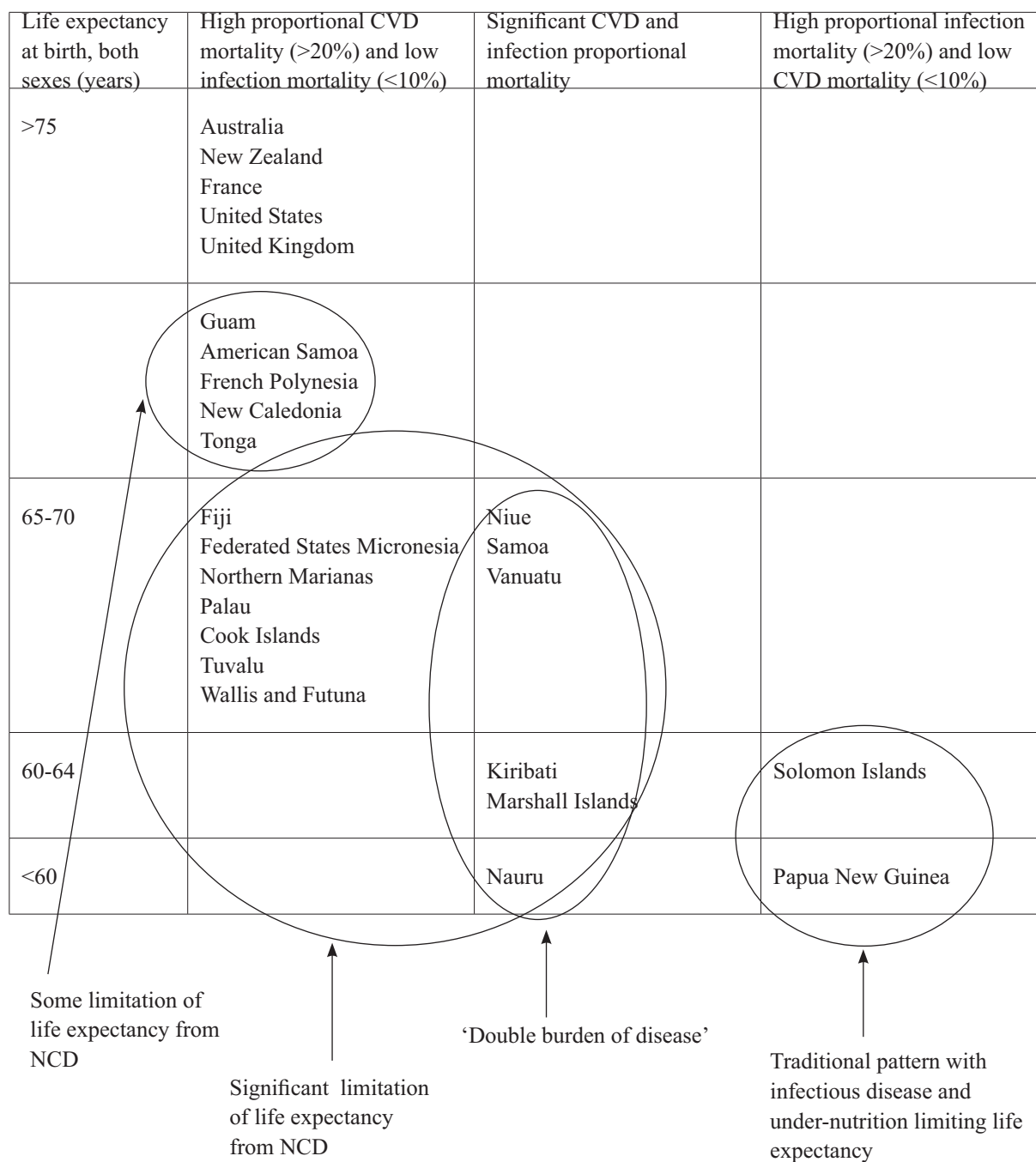
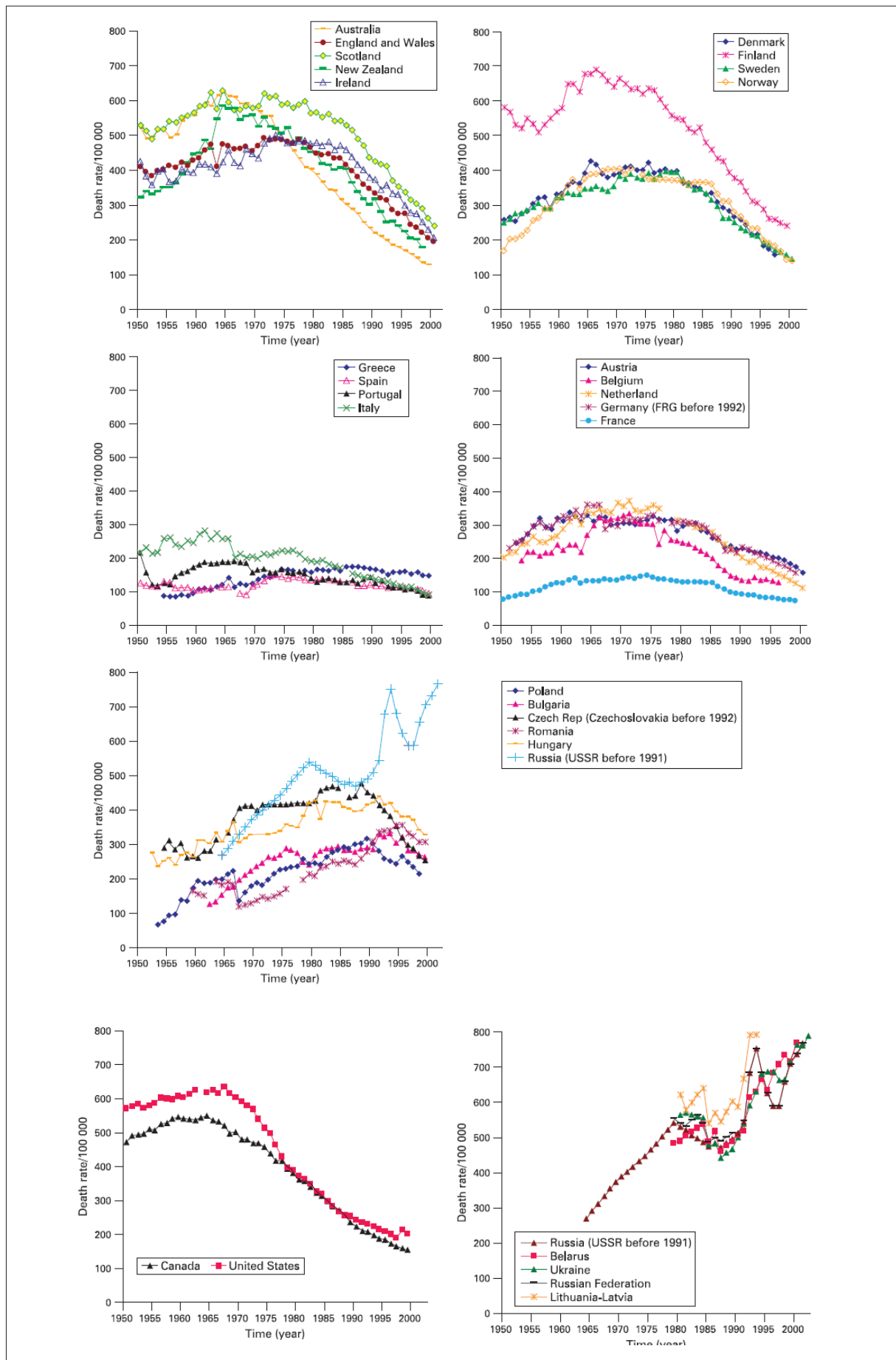
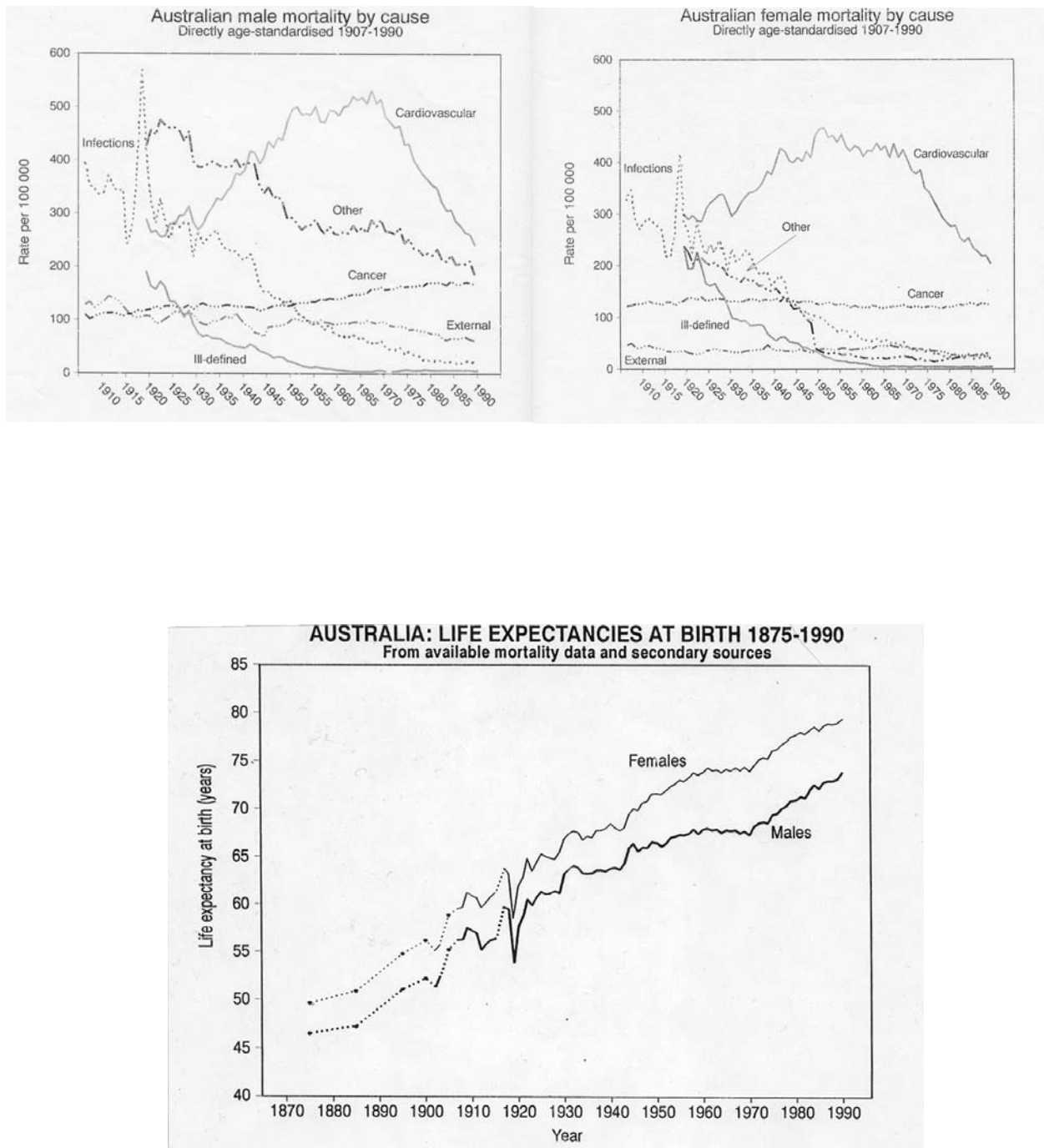
Figure 3. Life expectancy and cause of death in Pacific Islands (circa 2000)

Figure 4 The epidemic of coronary heart disease mortality in world countries from 1950

Source: Mirzaei, Truswell, Taylor et al. 2009.

Figure 5 The epidemic of cardiovascular disease and the Australian mortality decline

Source: Taylor, Powles & Lewis M. 1998a. 1998b

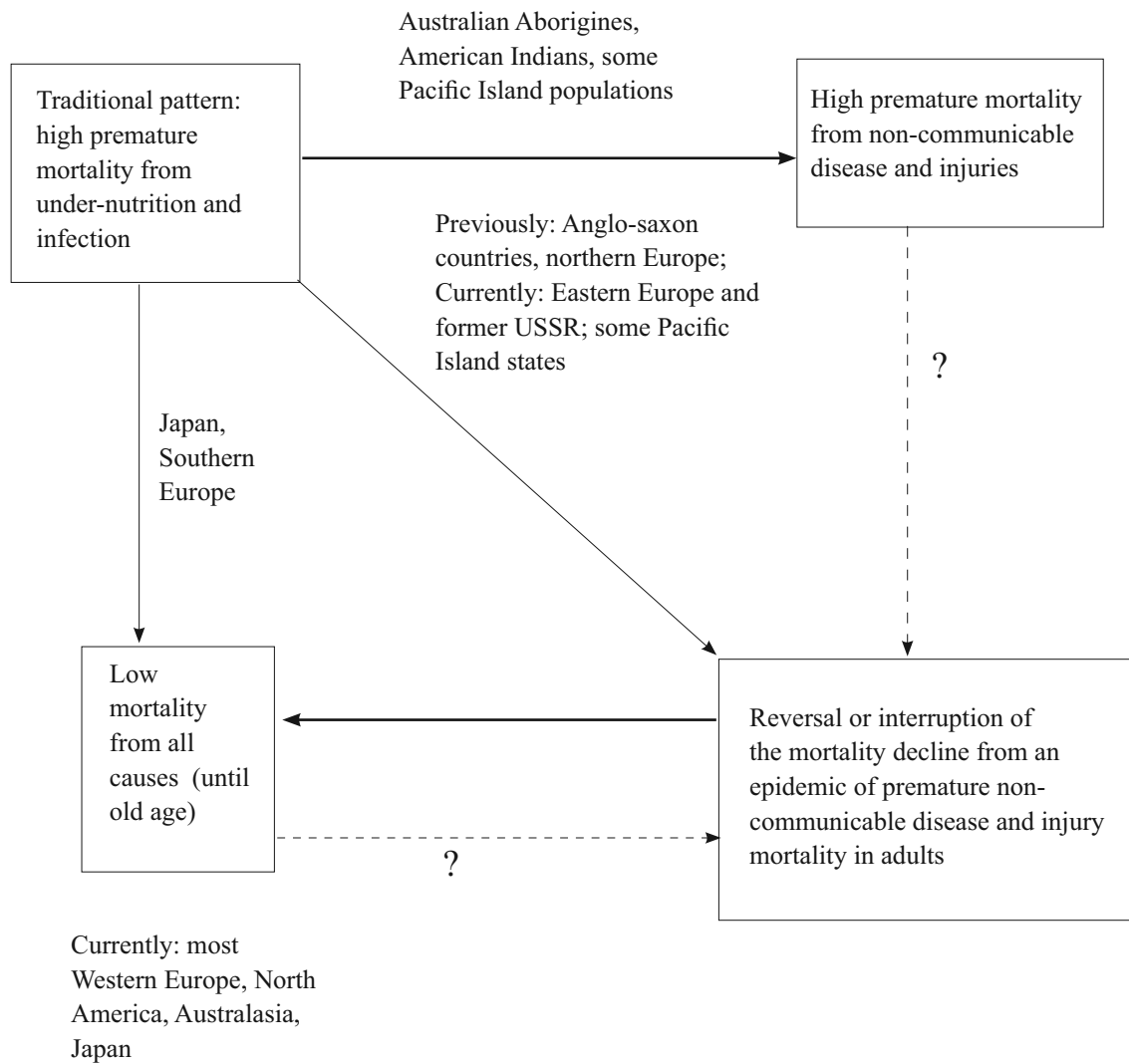
Figure 6 Trajectories from high mortality

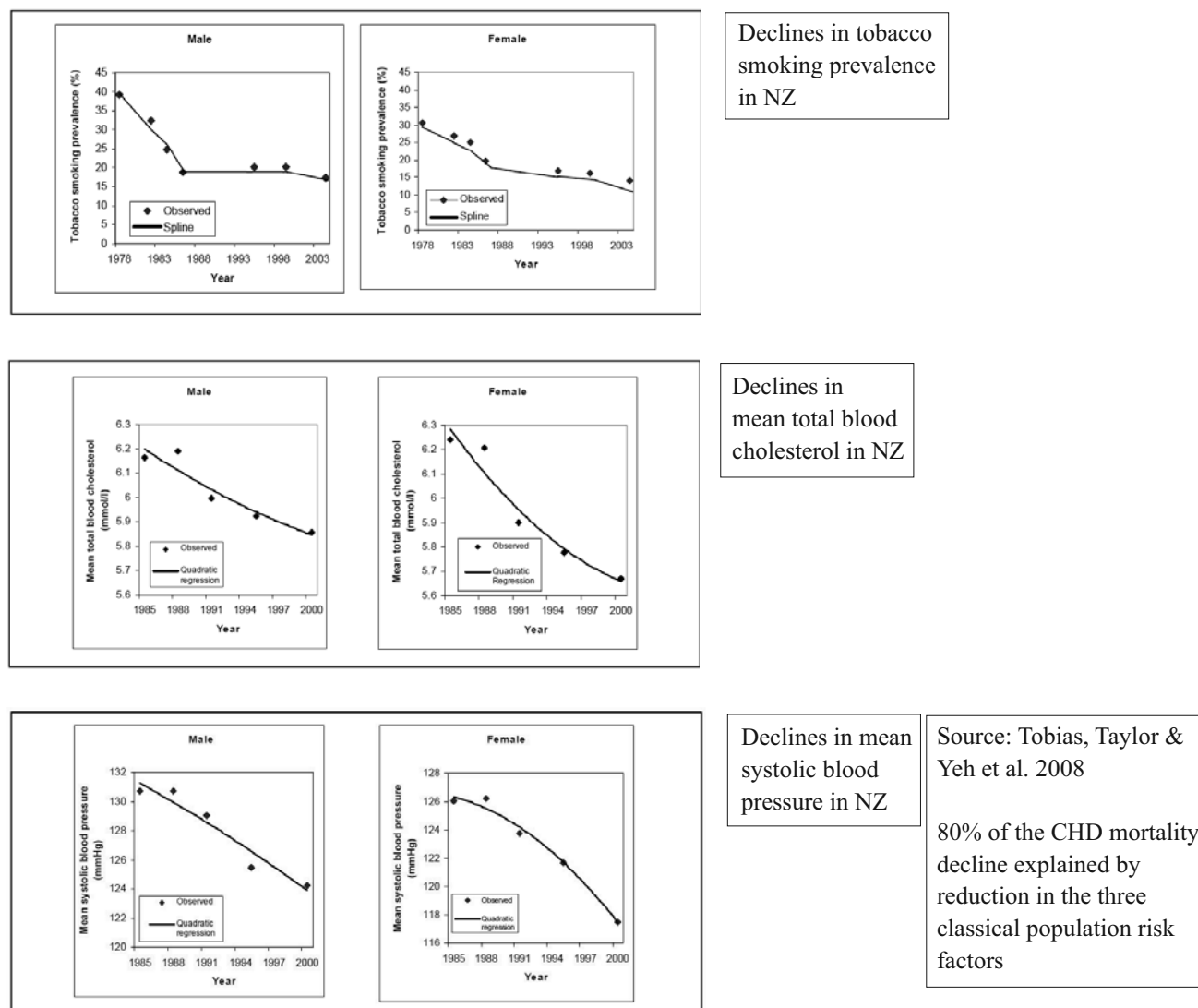
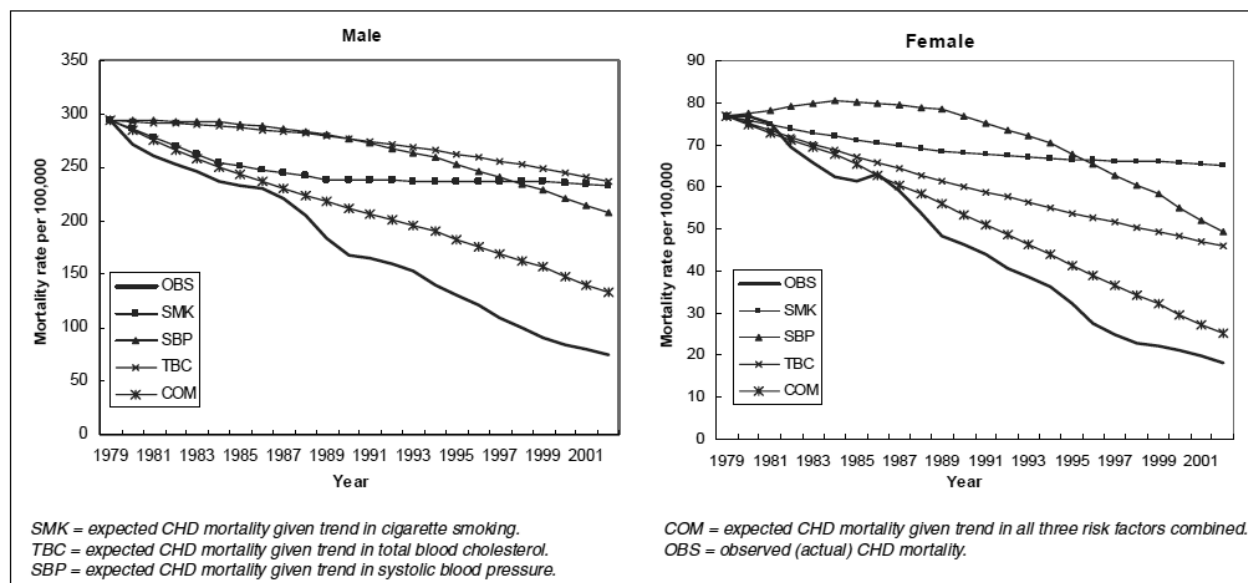
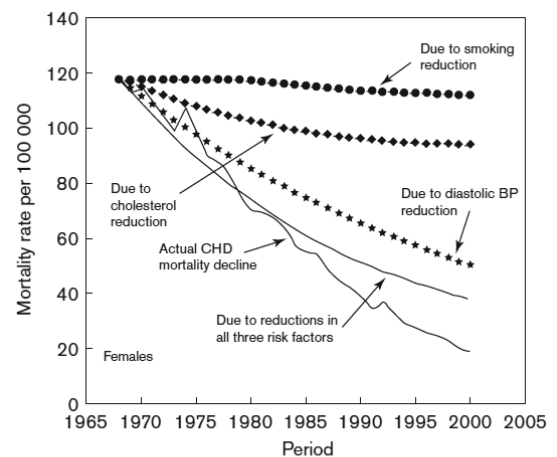
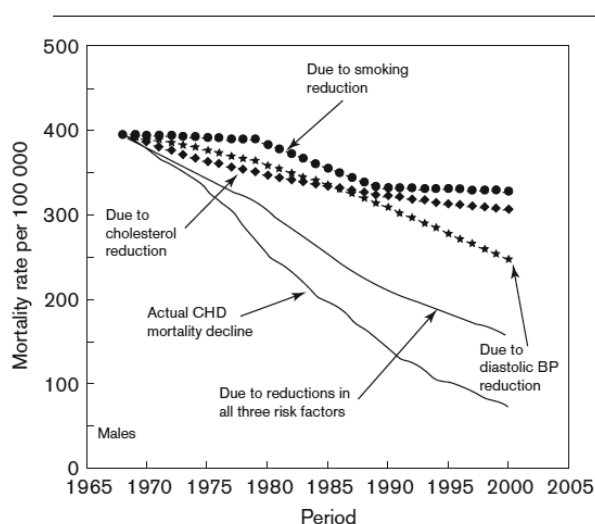
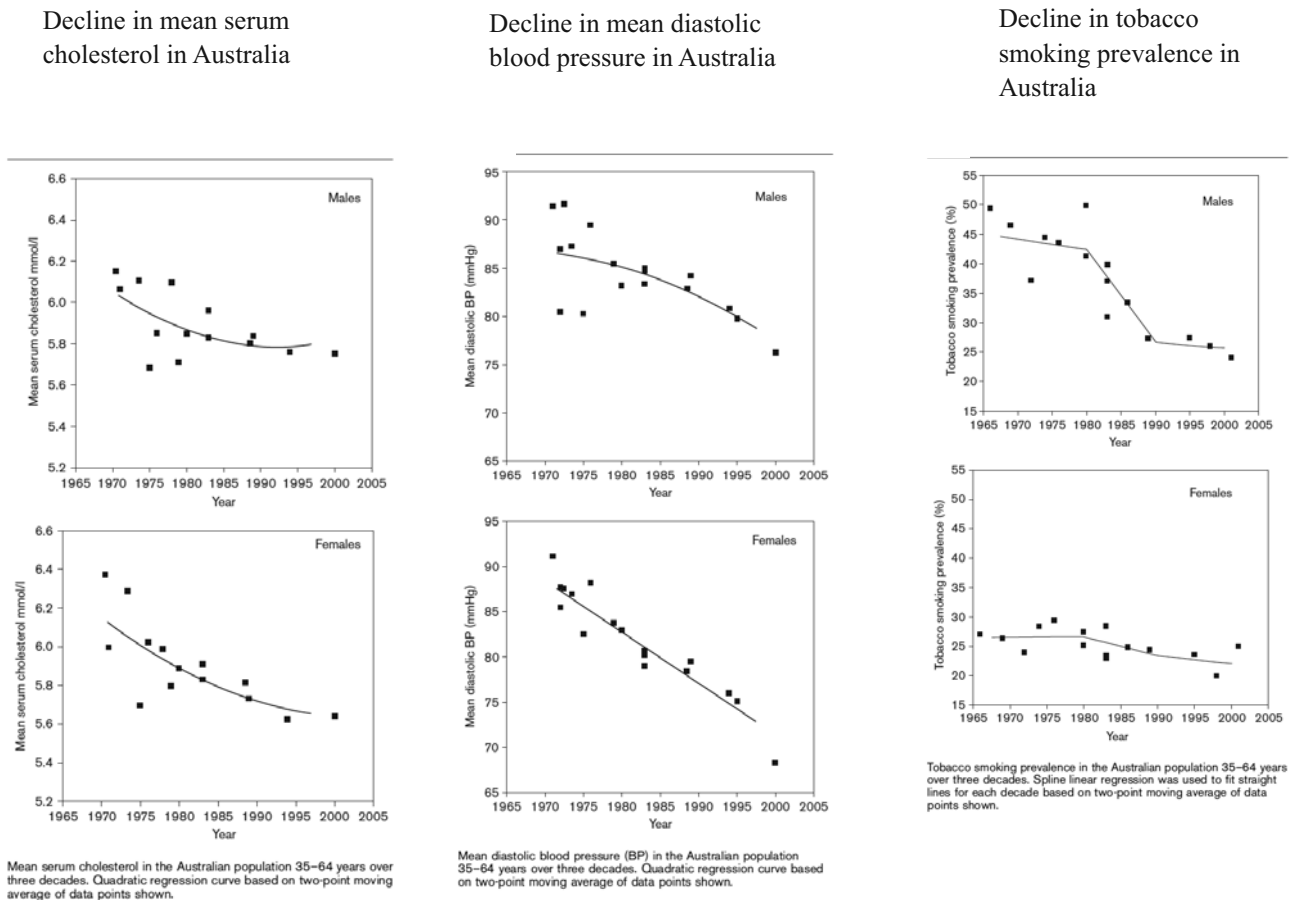
Figure 7 Decline in risk factors and coronary heart disease mortality in New Zealand**Figure 4:** Partition of CHD mortality decline by risk factor and sex, standardised for age (35-64 years), 1980-2004.

Figure 8 Decline in risk factors and coronary heart disease mortality in Australia

Contribution of changes in risk factors to decline in coronary heart disease (CHD) mortality rate in Australia aged 35–64 years 1968–2000. BP, blood pressure.

Source: Taylor, Dobson & Mirzaei 2006

78% of the CHD mortality decline explained by reduction in the 3 classical population risk factors

Table 1 (continued) Mortality estimates for Pacific Island countries

Country	Best recent available estimate (and range of estimates) ⁺					
(Popn '000 - year)	Year	Life expectancy at birth (yrs)		Year	Infant mortality (/1000)	Source and method of best recent estimate
		Male	Female			
Melanesia						
Fiji (810-1997)	1996	65 (61-72)	69 (65-76)	1996	20(7-26)	Demographic analysis of 1996 census
New Caledonia (197-1996)	1999	70(67-73)	76 (73-77)	1999	6(6-8)	Accurate vital registration
Papua New Guinea (3,608-1990)	2000	55 (51-58)	54 (54-62)	1995	73(61-73)	Life expectancy 2000 census analysis and surveys
Solomon Islands (404-1999)	1999	61 (61-70)	62 (62-74)	1999	66(20-66)	Demographic analysis of 1999 census
Vanuatu (193-1999)	1999	66 (64-70)	69 (65-74)	1999	29(17-39)	Demographic analysis of 1999 census
Micronesia						
Federated States of Micronesia (118-1997)	1994	64(63-65)	67 (65-67)	1994	46 (20-46)	Life tables imputed from childhood mortality from indirect methods
Guam (146-1997)	1995	73(70-73)	77(74-77)	1995	9 (9)	Accurate vital registration
Kiribati (81-1999)	1995	59(58-59)	65(62-65)	1995	62 (53-67)	Demographic analysis of 1995 census
Marshall Islands (51-1999)	1994	60(60-66)	63(63-69)	1994	63 (14-63)	Life tables imputed from childhood mortality
Nauru (10-1992)	1991–1993	54(54-55)	61(61-64)	1991–1993	13 (11-25)	Hospital death registration data
Northern Mariana Islands (59-1995)	1994–1996	67(67)	73(73)	1992-1996	10 (7-10)	Vital registration data Probably accurate
Palau (19-1998)	1995	64(64-66)	70(69-74)	1995	20 (19-28)	Vital registration data ^{25,26} Probably accurate

+ The ranges for life expectancy and infant mortality are the minimum and maximum estimates identified from a range of country and international and regional agency sources

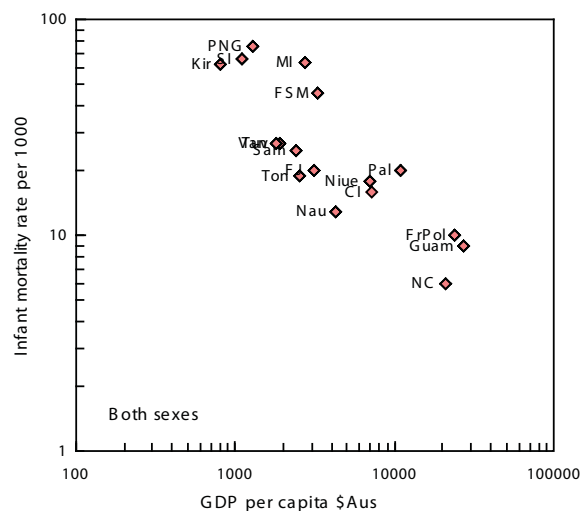
Source: Taylor & Lopez 2007.

Table 1 (continued) Mortality estimates for Pacific Island countries

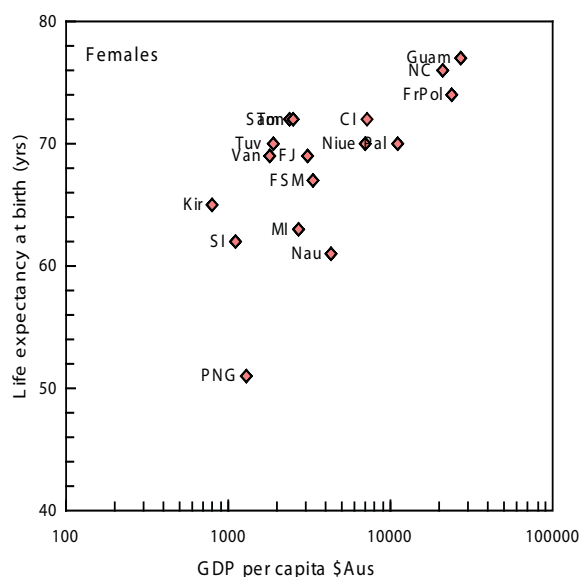
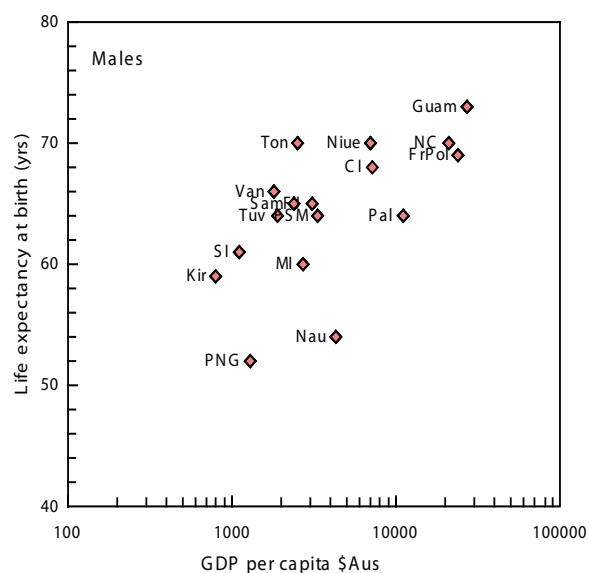
Country	Best recent available estimate (and range of estimates) ⁺					
(Popn '000 - year)	Year	Life expectancy at birth (yrs)		Year	Infant mortality (/1000)	Source and method of best recent estimate
		Male	Female			
Polynesia						
American Samoa (63-1999)	1995	68 (67-68)	76 (71-76)	1991-1995	13 (10-16)	Sources and methods unclear
Cook Islands (17-1999)	1995-2005	69 (59-71)	73 (65-75)	1991-1996	22 (4-34)	Vital registration data
French Polynesia (220-1996)	1995-2005	71 (70-71)	76 (75-77)	1996	6 (5-7)	Accurate vital registration data
Niue (2-1997)	1991-1997	70 (63-74)		1991-1996	18 (18-22)	Probably accurate vital registration data
Samoa (175-1999)	1998	65 (65-70)	72 (67-72)	1998	25 (11-25)	Vital statistics sample survey
Tokelau (1.5-1996)	1996	68 (68)	70 (70)	1991-1995	32 (32-38)	Vital registration data Probably accurate
Tonga (97-1999)	2000	70 (64-71)	72 (67-74)	1996	16 (8-24)	Demographic analysis of 1996 census Annual Report Ministry of Health
Tuvalu (11-1999)	1991	64 (64)	70 (70)	1990-1999	27 (16-56)	Life expectancy data from demographic analysis of 1991 census
Wallis and Futuna (14-1996)	1990-1995	67 (67-70)	71 (71-74)	1990-1995	15 (6-18)	Probably accurate vital registration

+ The ranges for life expectancy and infant mortality are the minimum and maximum estimates identified from a range of country and international and regional agency sources

Source: Taylor & Lopez 2007.

Figure 9 Mortality in relation to GDP in Pacific Island States

GDP and mortality circa 2000



GDP and mortality circa 1980 and 2000

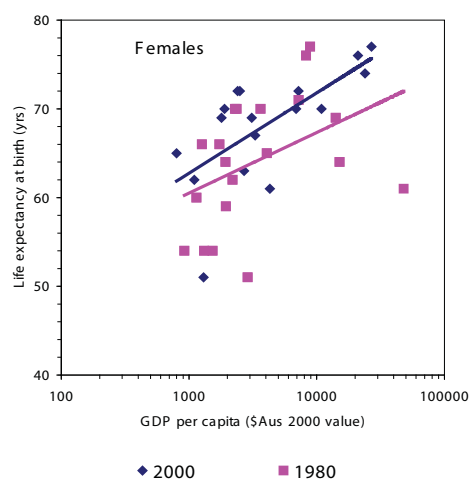
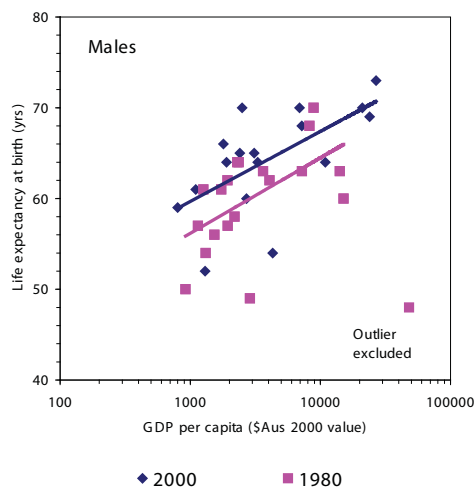
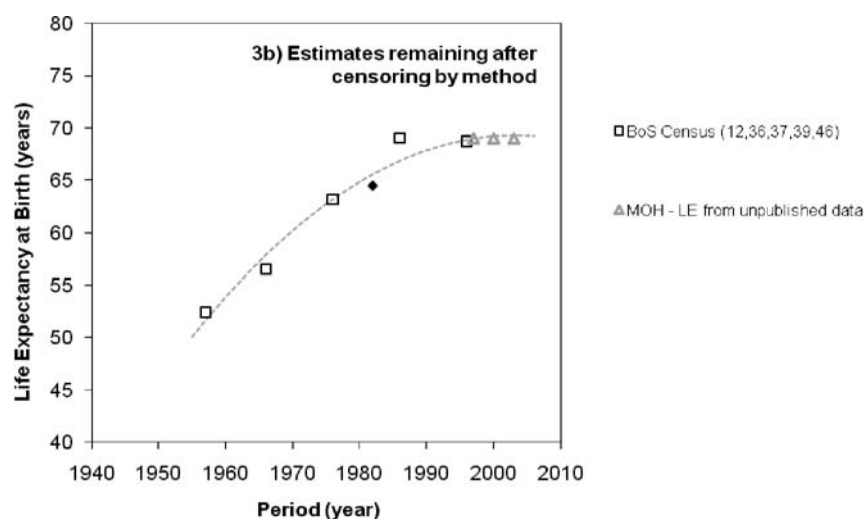
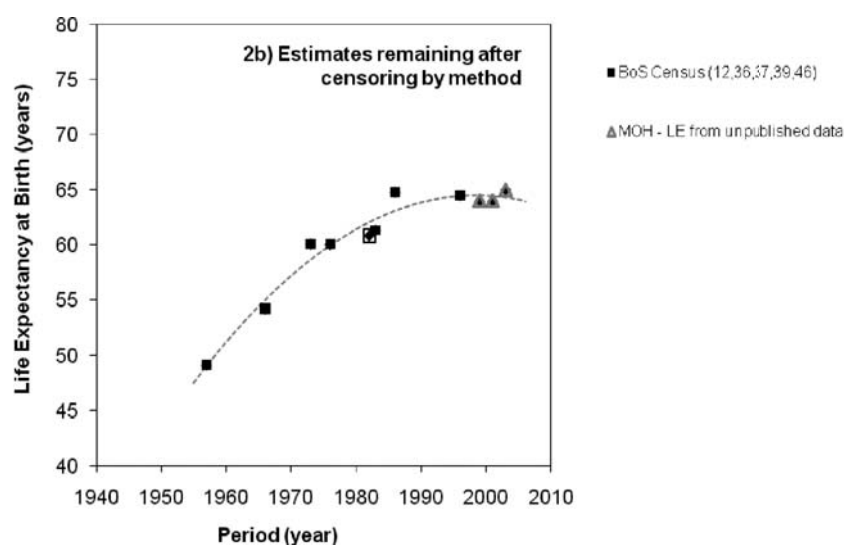
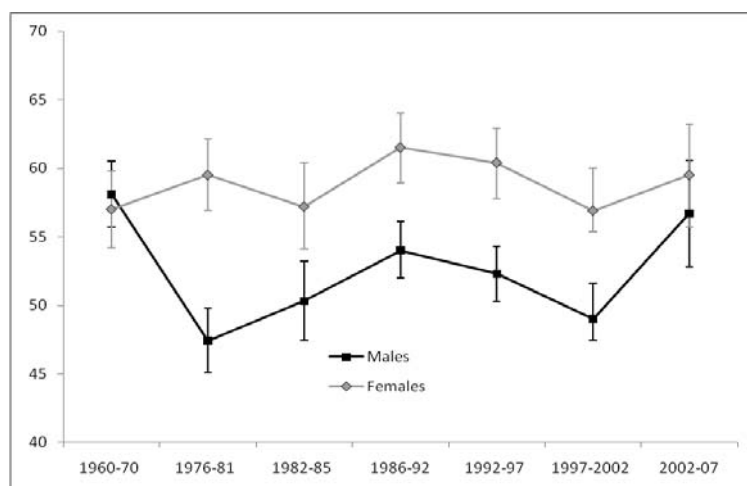
Source:
Taylor,
2008.

Figure 10 Stagnation in life expectancy increase based on published data**Fiji****Nauru**

From published and yet to be reported
death registration data

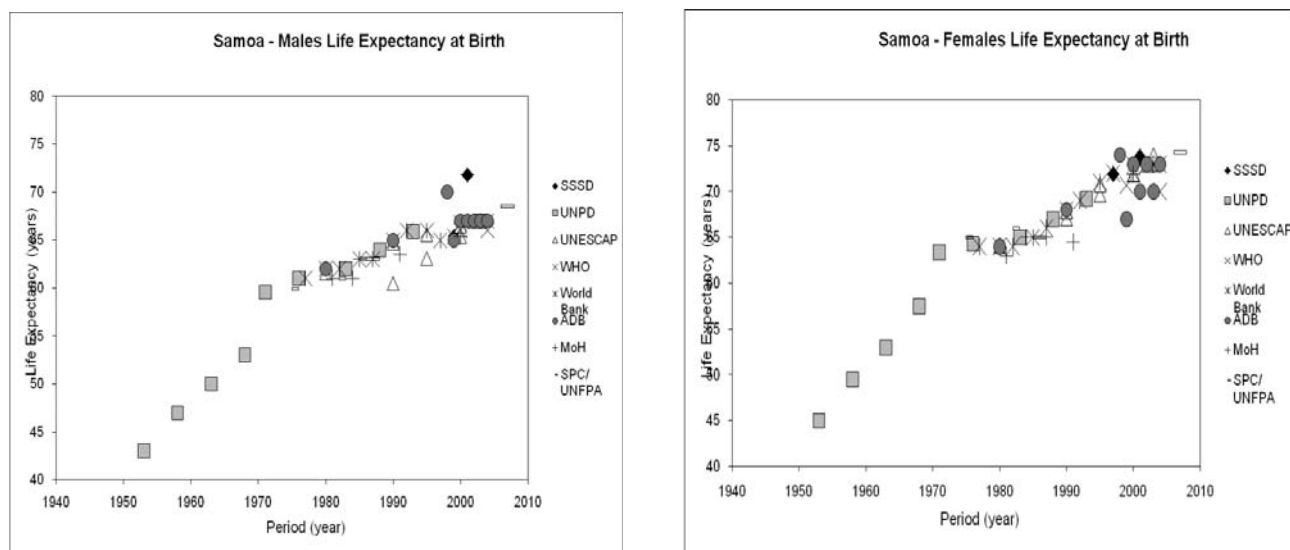
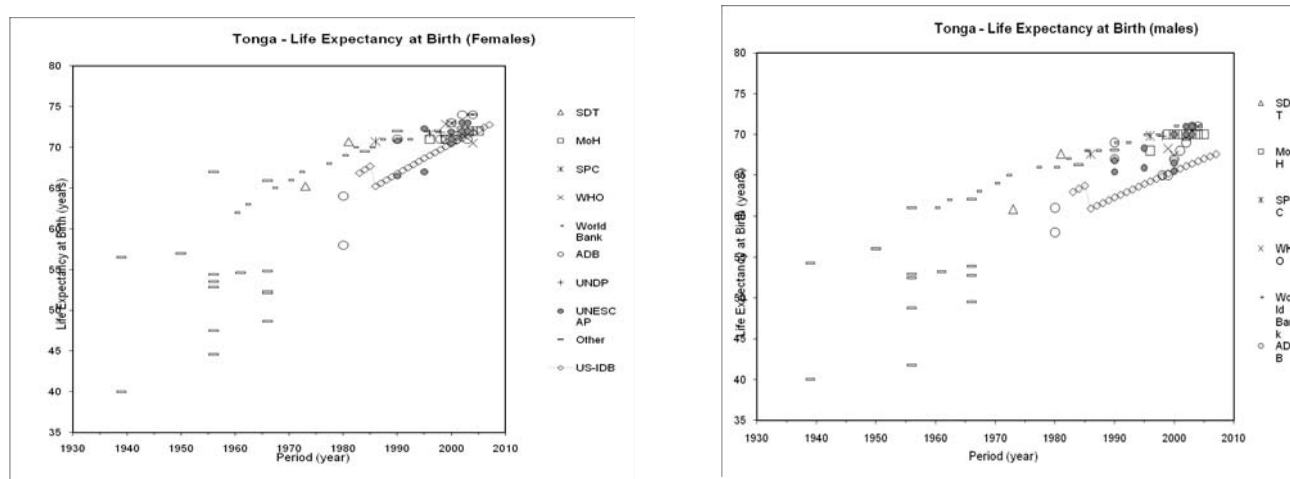
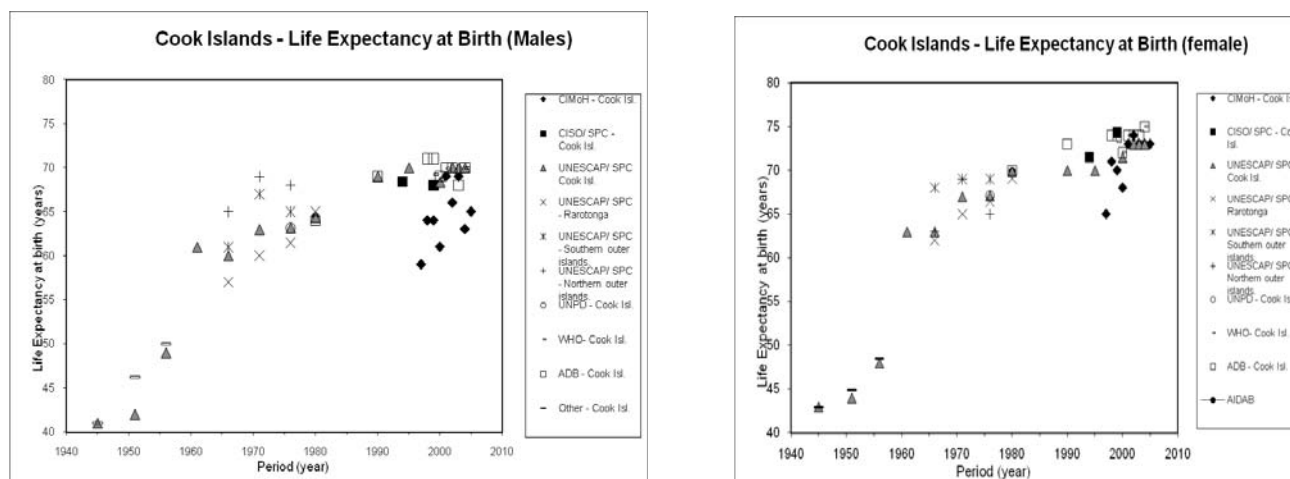
Figure 10 (continued) Stagnation in life expectancy increase based on published data**Samoa****Tonga****Cook Islands**

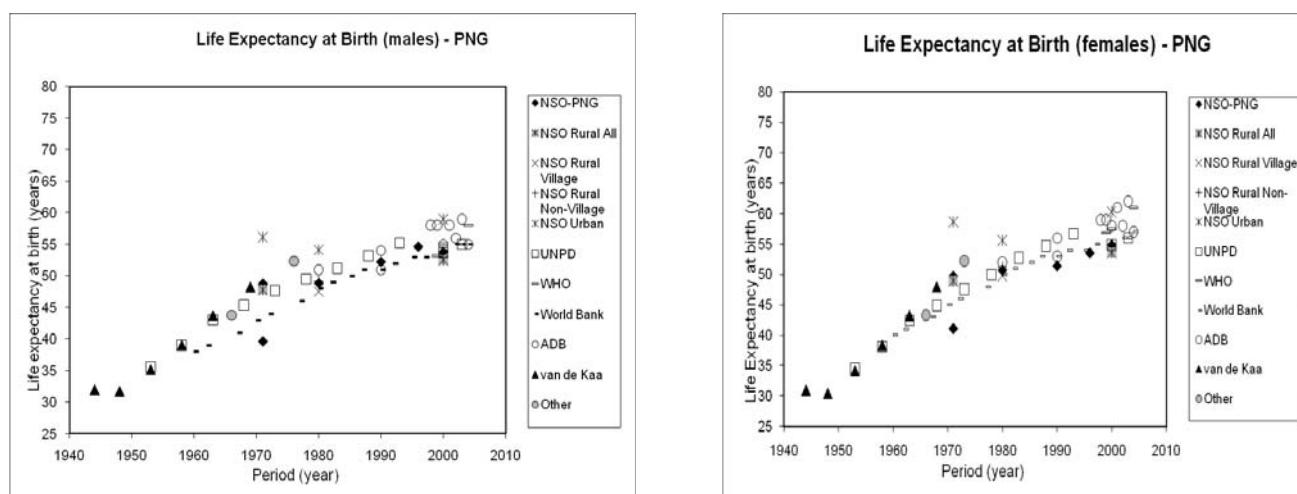
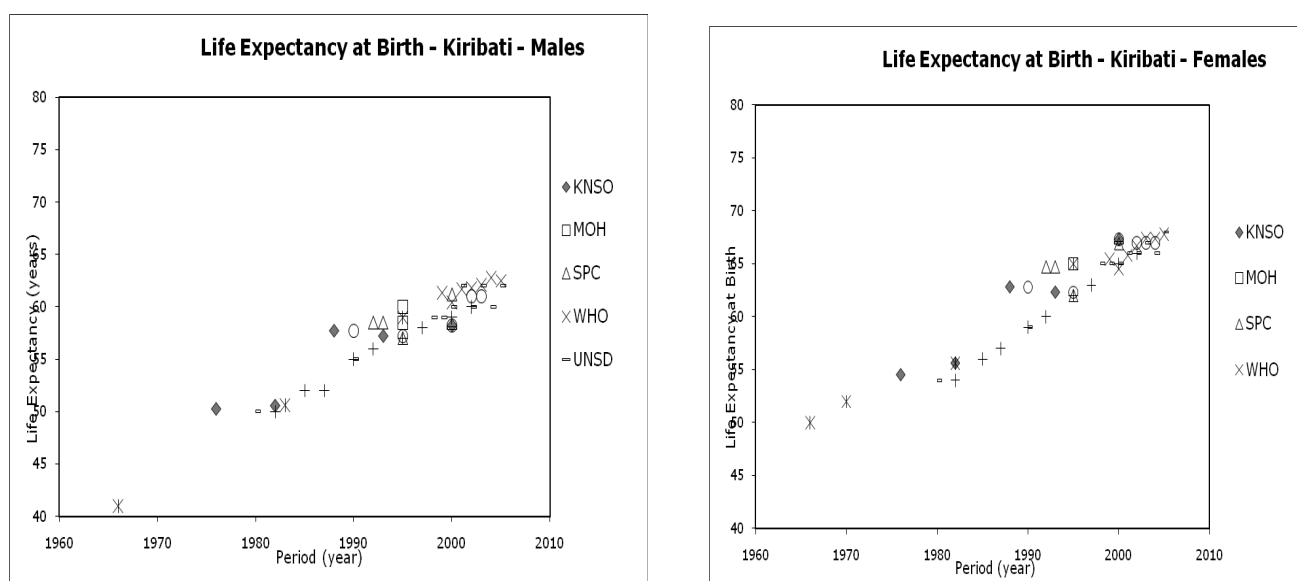
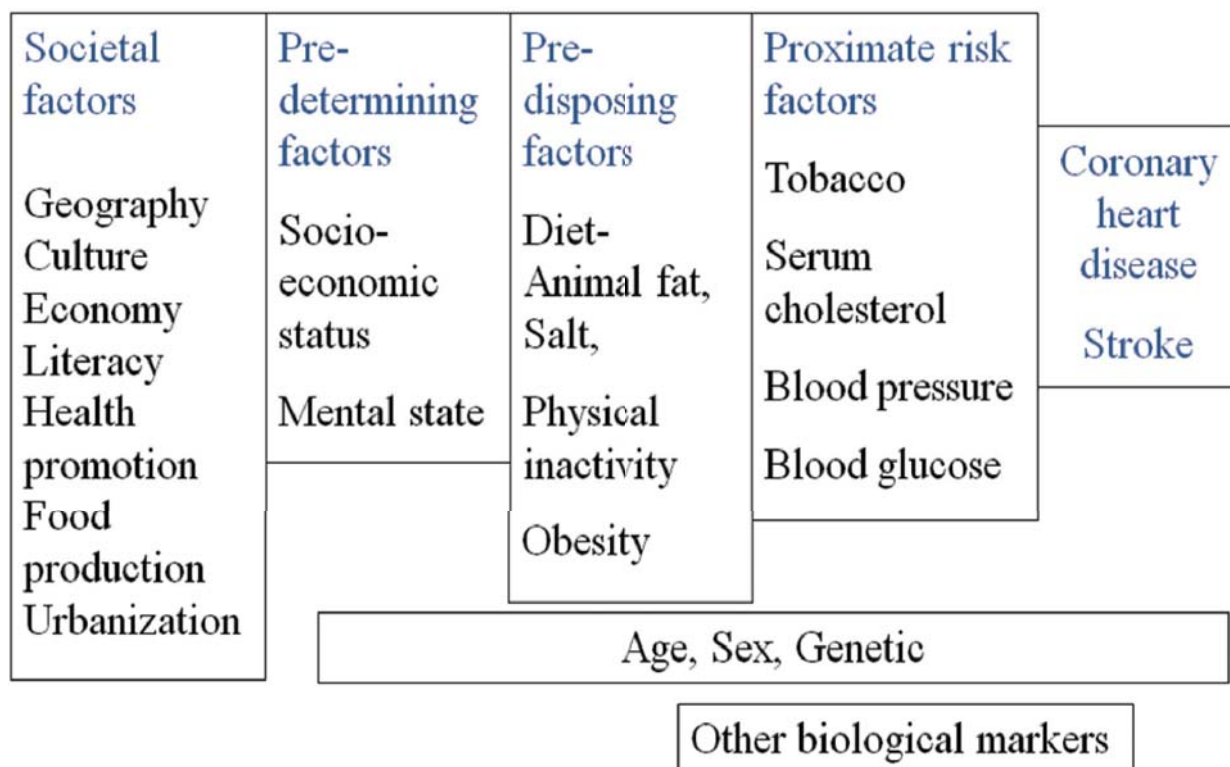
Figure 10 (continued) Stagnation in life expectancy increase based on published data**Papua New Guinea****Kiribati**

Figure 11 Predisposing and proximate risk factors for cardiovascular disease

Coronary heart disease and stroke risk factors



Diabetes risk factors and consequences

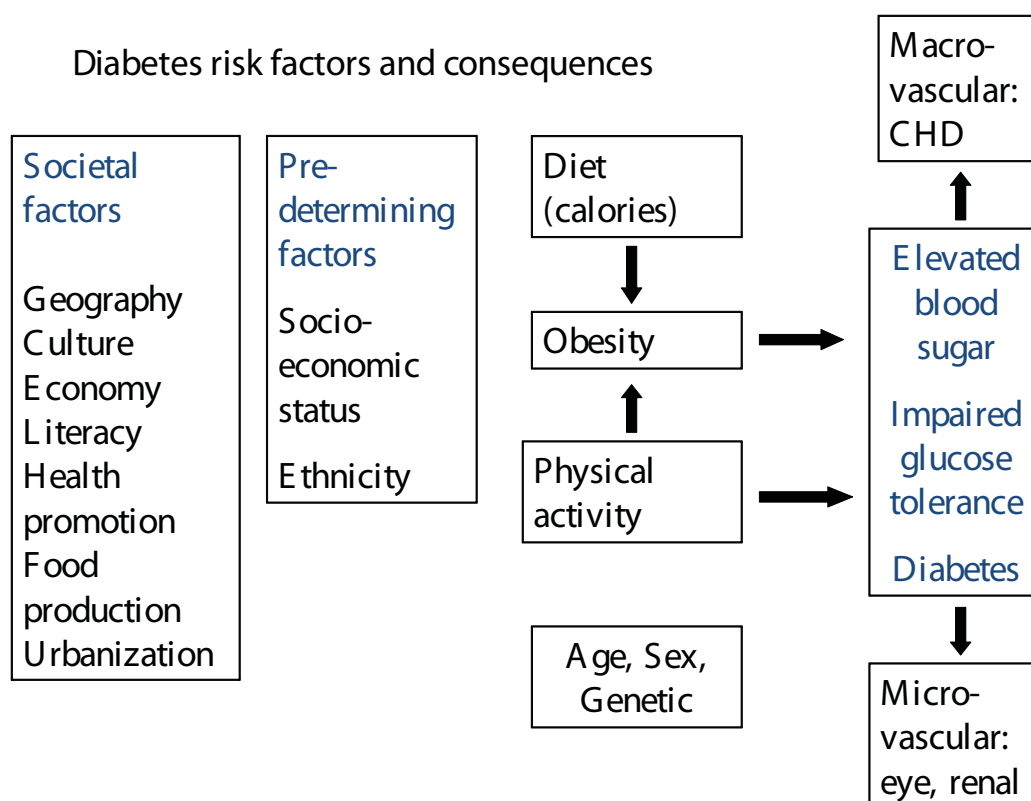
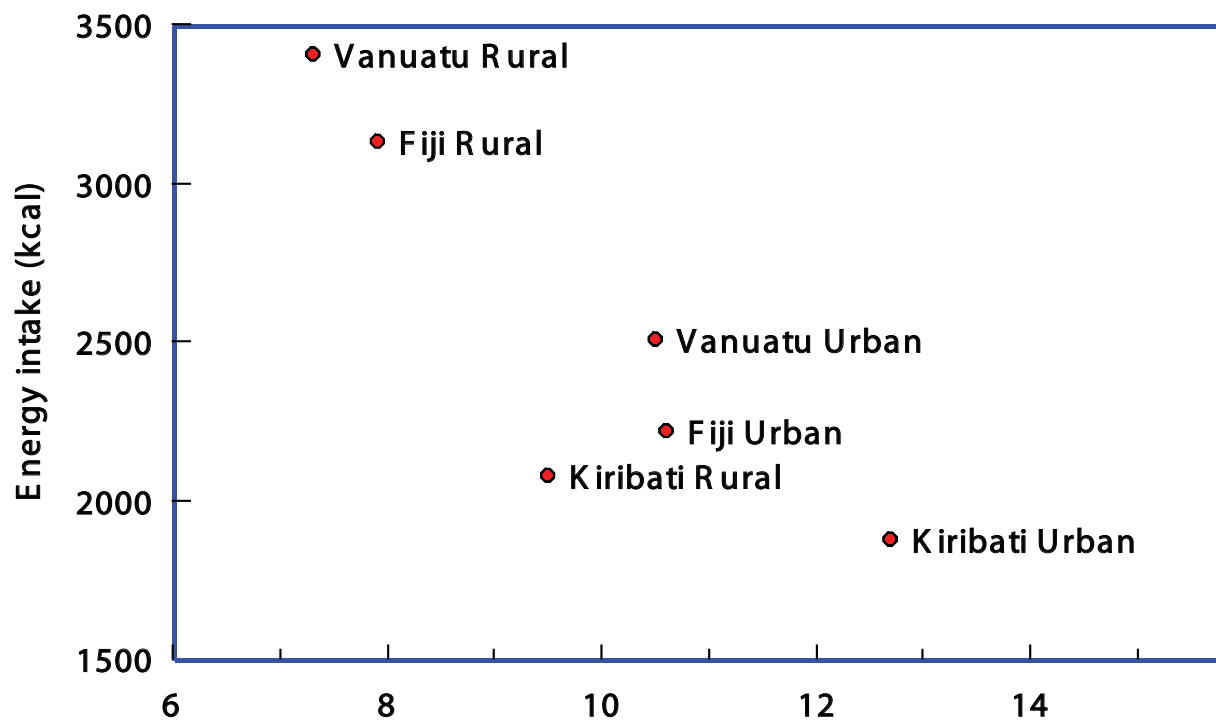


Figure 12 The role of exercise: energy intake and fatness in rural and urban males, Vanuatu, Fiji, Kiribati, circa 1980s

Source: Taylor R, et al. Dietary intake, exercise, obesity and non-communicable disease in rural and urban populations of three Pacific Island countries. *Journal of American College of Nutrition*. 11(3):283-293. 1992

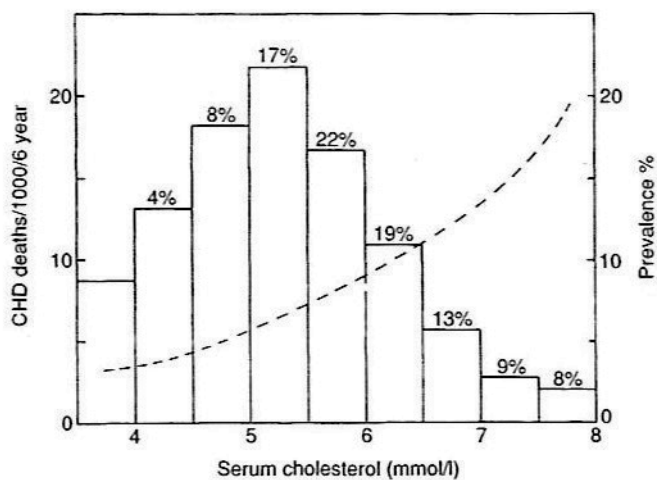
Figure 13 The Prevention Paradox

Fig. 3.2 Prevalence distribution (bars) of serum cholesterol concentration related to age-adjusted mortality from coronary heart disease (CHD) (broken curve) in men aged 40–59 years. The number above each bar is the percentage of the deaths 'attributable' to the cholesterol effect and arising at that level. (Data from Martin *et al.* 1986.)

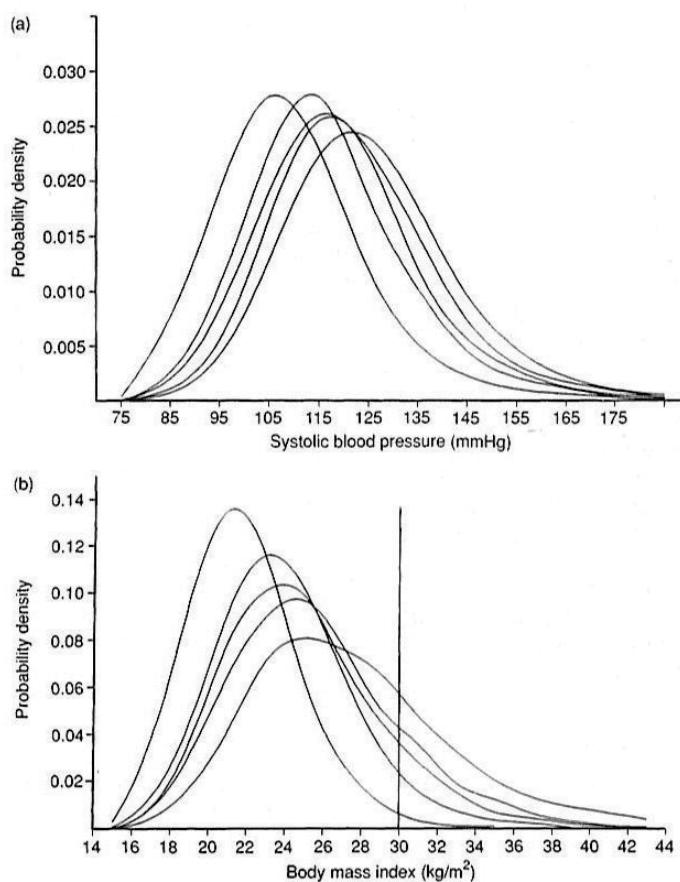


Fig. 5.2 The shifting distributions of some characteristics of five population groups of men and women aged 20–59 years derived from 52 surveys in 32 countries: (a) systolic blood pressure; (b) body mass index.

Source: Rose G.
The Strategy of Preventive
Medicine, Oxford University
Press 1992.

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The role of nutrition in population and development: the micronutrient deficiency issue in Fiji

Jimaima T Schultz

Economic development and the nutritional status of populations are inextricably linked (Strauss & Thomas 1998). Because nutritional adequacy affects the quality of humans as capital, it ultimately influences economic performance. Conversely, the extent, form and conditions of economic development affect the nutritional status and health of the population (Mason, Garcia, Mitchell et al. 1995).

While economic development has clearly contributed to improving the quality of life—health status, life expectancy, infant and child mortality, access to basic services—economic growth, agricultural advances and infrastructure expansion do not always occur with improvements in well-being. Many development policies create or worsen poverty, as well as bringing the health problems associated with industrialisation (Benson 2008; Escobar 1995).

“The nutritional wellbeing of a population is an indicator of national development” and as such reflects the combined performance of its social, economic, agriculture and health sectors (FAO & WHO 1992).

Improving nutrition—a development priority within the social and economic context

Proper nutrition is a key determinant of health throughout the lifecycle (Gibney, Margetts, Kearney et al. 2004) and extends from one generation to the next (Boyle & Holben, 2006). Research has demonstrated that poor nutrition in women during early pregnancy impairs the development of the foetus. Infants born of malnourished mothers are more likely than children of healthy women to be ill, to have birth defects, and be retarded in their physical and mental development (Allen 2001; Hackman 1983). For female children, a poor start in life means that they are likely to grow up poorly equipped to support normal pregnancy, resulting in bearing poorly developed children (Boyle & Holben 2006). Furthermore, impaired intra-uterine growth is likely to ‘program’ the foetus for chronic diseases such as coronary heart diseases, hypertension and Type 2 diabetes in adult life (Godfrey & Barker 2000). These chronic diseases are the major causes of death among the economically active population in developing countries such as Fiji (MOH 2008).

Although improving the welfare of human populations in developing countries has long been a goal of development, two of the principal components of welfare—child development and nutritional status—rarely emerged as explicit objectives. (Demment, Young & Sensenig 2003)

The World Health Organization supported the development of the Millennium Development Goals (MDGs), to tackle the root causes of disease and health inequalities—the social conditions in which people live and work (WHO 2005). The MDGs recognise the interdependence of health and social conditions and the inadequacy of health strategies that fail to address the social roots of illness (WHO 2005). They promote policies that address the social roots of unfair and unavoidable suffering as an unintended outcome of development.

Improving nutrition is the most fundamental challenge to human welfare and economic growth in the developing world (Benson 2008). According to the Food and Agriculture Organisation (FAO), about 800 million people (i.e. one in six people) in the developing world are undernourished or malnourished due to low food availability, poor health services, unhealthy environments, lack of knowledge and inappropriate nutrition care. In Fiji, we have both over- and under-nutrition. A number of health and nutrition surveys conducted in Fiji in recent years, such as the 2002 Ministry of Health STEPS survey, the 2004 National Nutrition Survey (NFNC 2007), the 2005/6 OPIC baseline study of adolescents in secondary schools and the 2008 micronutrient survey of children (6 months to 5 years old) (NFNC 2008), show a spectrum of deficiency diseases as well as the diseases of industrialisation, such as certain non-communicable diseases (NCDs). These problems have been attributed to major changes in diet and lifestyle as a result of economic development and urbanisation (Kennedy, Nantel & Shetty 2004; Coyne 2000). While economic development has brought economic wealth and improvements in standards of living to Fiji, these have not been evenly distributed. Poor nutrition and poverty are closely linked and, as noted by Narsey (2008) and Barr (2003), poverty has increased during the last three decades in Fiji.

Malnutrition (micronutrient deficiency)—an indicator of food insecurity and poverty

Malnutrition is a general term used to describe deficiency (under-nutrition), excess (over-nutrition) or imbalance of macro- and micro- nutrients needed by the body to maintain health (Gibney, Elia & Ljungqvist 2005; Thomas 2001). Malnutrition, or micronutrient deficiency, also known as ‘hidden hunger’ (FAO & EU 2008), can be caused by food insecurity or non-food reasons such as lack of education, poverty, worm infestation (poor hygiene), and prioritising other needs, such as traditional obligations. Food security, the availability of food and one’s access to it, is a multi-dimensional concept with four major elements: availability, access, utilization, and stability (Box 1).

Box 1 Dimensions of food security from a nutritional perspective

Physical AVAILABILITY of food—supply (production, stock level and net trade; national level)
Economic and physical ACCESS to food
Food UTILISATION—How the body makes the most of food nutrients: quantity and quality
STABILITY of the above three dimensions over time (safe and nutritious food that meets dietary needs)

Source: FAO & EU 2008

Deficiency is a direct outcome of poor food ‘utilisation’ ; people must be able to access or acquire the food they need. Traditionally, people in Fiji obtained food from their own gardens, through barter, as gifts or via community support systems (Schultz 1997). Today, however, access to food is influenced by other forces: market factors, prices and one’s purchasing power, which is related to employment (Kennedy et al. 2004). If people have money but food is not available in the market place, people are at risk of food insecurity. By the same token, if food is available but people have no money or not enough to buy food, they too are food insecure.

There is an erroneous assumption that if national food security is achieved, a positive nutritional outcome will automatically follow (Meerman 2008). To illustrate the point: the Fiji Food Balance Sheet (NFNC 2007) showed that Fiji is food-secure. The report showed that the energy supply was well over the FAO-WHO recommended amount (53% in excess), yet, micronutrient deficiencies are still prevalent in Fiji. In other words food security at the national level does not necessarily translate into equal access for everyone. It is evident from the results of the National Food and Nutrition Centre (NFNC) nutrition survey that some sectors of our population are not able to access enough nutritious food, even though our national data show that Fiji is food-secure.

Maternal and infant health—an indicator of a nation’s health

The health of a nation is often judged by the health status of its mothers and children (Boyle & Holben 2006). A common indicator of a nation’s health, according to epidemiologists, is its infant mortality rate (IMR) per 1,000 live births. The leading causes of death among infants in developing countries are pre-term delivery, low birth weight, birth defects and maternal complications (Boyle & Holben 2006).

UNICEF (2005) showed significant disparities in IMRs, even in industrialised countries. For example, in that year, the IMR for Denmark, Norway, Japan and Sweden was 3.0, while the IMR for the USA was 7.0, even though the USA spent more money on health care than most other countries. The same report showed New Zealand’s IMR was 5.0, while Australia’s was 6.0. These figures are averages for the nation and hide the disparities that exist between ethnic groups, and between the poor and the non-poor. For example, the IMR for black infants in the US was 13.8, twice as high as for whites.

The IMR for Fiji decreased from 20.76 in 2005 to 13.1 in 2008 (MOH 2008). This puts Fiji in a relatively good position, compared to the IMR for blacks in the USA. Although Fiji is doing relatively well in terms of reducing its IMR, there is still room for improvement.

While an increased risk of morbidity and death has been observed since the 1990s, even in the USA (NCHS 2003), the difference in the incidence of low birth weight (LBW) between black and white, poor and non-poor has remained largely unchanged. In Fiji, the 2004 nutrition survey showed that 10.2% of all children were born

with low birth weight, the majority of whom were Indo-Fijian children. A high proportion of children in rural areas also had low weight at birth.

As noted by English and Ngu (1997) and Tomkins and Watson (1989), a well-nourished body hosts an immune defense system that effectively protects against tissue invasion from infection. Referring to immune systems functioning, one researcher has compared two factors: the benefits of good nutrition and modern medicine. He found that for 38 years gain in life expectancy, nutrition contributed 80% while modern medicine contributed only 20%.

A number of factors are associated with maternal and infant health (American Dietetic Association 2002). Of these, adequate nutrition plays a critical role in a healthy pregnancy outcome.

Why should we be concerned about micronutrient deficiency?

Women and children are the most physiologically and culturally vulnerable groups as a result of natural and man-made disasters and economic development, especially in developing countries. Yet only if women and children are healthy will the nation be healthy.

The effect of micronutrient deficiency on child development and the long-term consequences on adult human capital is well documented (Papalia, Olds & Feldman 2007; Alderman, Behrman & Hoddinott 2004; Demment et al. 2003; Gibney et al. 2002; Null 1995; Berg 1973). These effects and consequences include:

- poor infant and child growth (physical, mental and social) i.e. negative consequences on growth potential
- poor resistance to diseases
- an underlying cause of morbidity and mortality in children and adults alike
- inability to attain full social and economic potential and contribute creatively to their own and their nation's economic development
- low productivity in adults
- deficiency in one micronutrient has a domino effect on the functions of other micro- and macro- nutrients on food utilisation in the body.

Many of the health problems faced by adult women have their origins in childhood (WHO 2009).

The situation among women and children in Fiji

This section describes the current rates of iron deficiency anaemia, and the iron, vitamin A and zinc status in women of child-bearing age (CBA) from analysis of the 2004 National Nutrition Survey (NFNC 2007) and the 2008 micronutrient study of children (6 months to <6 years of age) (NFNC 2008).

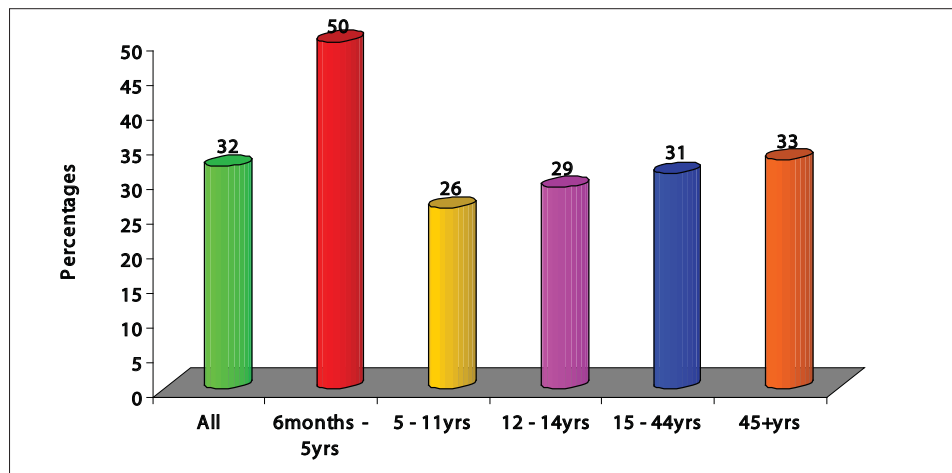
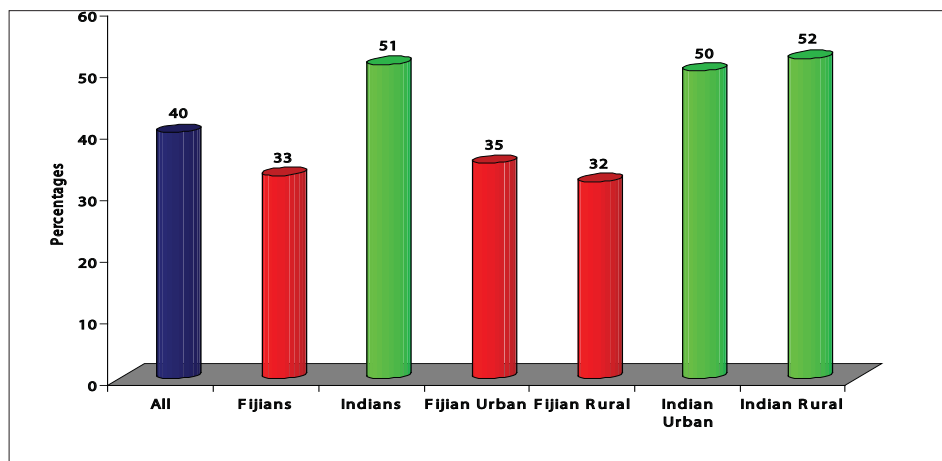
Micronutrient status among women of child-bearing age (CBA) 15-45yrs

a) Anaemia status

Anaemia, the final stage of iron deficiency, causes a reduction in the concentration of haemoglobin in the red blood cells (Bowman & Russell 2006; Gibney et al. 2005). It is one of the biggest nutrient deficiency problems in Fiji and has been for many years.

The 2004 National Nutrition Survey (Figure 1) showed the overall rate of anaemia (haemoglobin level) among the population was 32%, an increase of 5% between 1993 and 2004. This trend is a cause for concern. Examined by age group, the worst affected were children 6 months–<5yrs (50%) i.e. one in every two children were anaemic.

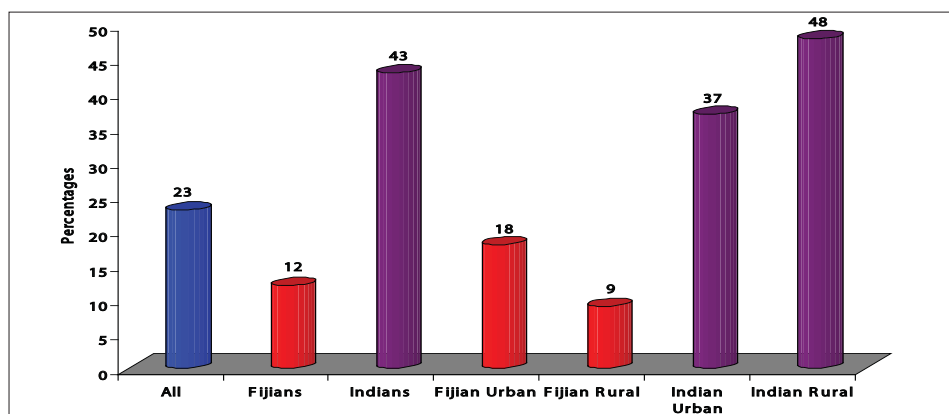
Examination of the data on women of child-bearing age (CBA) 15–45 years (Figure 2) showed that 51% Indo-Fijian women were anaemic, compared to 33% of Fijian women. There was little difference in the rates for both ethnic groups in rural and urban areas.

Figure 1 Percentage of people with anaemia by age group, Fiji, 2004**Figure 2** Percentage of anaemic women of child-bearing age by ethnicity and area type, Fiji, 2004

b) Iron status

Nutrition iron deficiency occurs when the body requirements cannot be met by iron absorption from the diet. This appears to be the main contributing factor to anaemia in Fiji. Iron deficiency is one of the leading risk factors for disability and death worldwide (Zimmermann & Hurrell 2007).

Figure 3 shows the overall rate of iron deficiency among women of child-bearing age as 23%. More Indo-Fijian women (43%) were iron deficient than were Fijian women (12%). Slightly more Indo-Fijian women living in rural areas were iron deficient (48%) compared with those living in urban areas (37%). The reverse trend was observed in Fijian women, where twice as many urban dwellers (18%) were iron deficient compared to rural dwellers (9%).

Figure 3 Percentage of iron deficient women of child-bearing age by ethnicity and area type, Fiji, 2004

c) Vitamin A status

Vitamin A is needed to prevent infections, keep eyes healthy and help children grow properly (Boyle & Holben 2006; Mann & Truswell 2002; Gibney, Vorster & Kok 2002). Early signs of vitamin A deficiency include growth failure, loss of appetite, impaired immune responses with lowered resistance to infection and impaired iron use that leads to anaemia. Clinical signs, such as night blindness, develop when liver reserves are almost exhausted (Gibney et al. 2005).

Figure 4 Percentage of vitamin A deficient women of child-bearing age by ethnicity and area type, Fiji, 2004

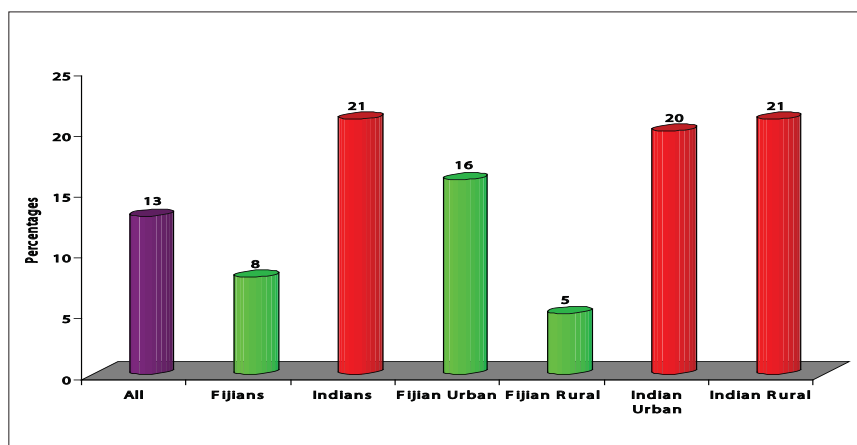


Figure 4 shows that the overall rate of this deficiency among women of child-bearing age was 13%. More Indo-Fijian women were vitamin A deficient (21%) compared to Fijians (8%). There were similar rates among Indo-Fijians living in urban and rural areas (20% and 21%). Relatively higher rates of vitamin A deficient Fijian women live in urban areas (21%) compared to those in rural areas (16%). Although the rate of vitamin A deficiency is not as high as that of anaemia, it is still of concern.

d) Zinc status

Any level of zinc deficiency is of concern because of its importance in protein synthesis and gene expression, and its role in the proper function of vitamin A and D (Gibney, Vorster & Kok 2002). Zinc deficiency contributes to anaemia (Smolin & Grosvenor 2008).

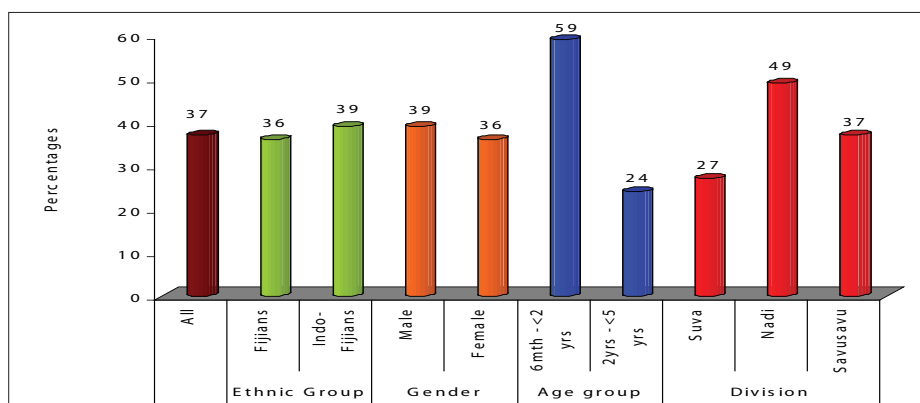
The overall zinc deficiency rate for women of child-bearing age was 39% and Fijian women were found to have higher rates of zinc deficiency (46%) than their Indo-Fijian counterparts (31%). Another significant difference was that Fijian women living in rural areas had higher rates (45%) than Indo-Fijian women (31%) in rural areas.

Micronutrient status of children 6 months – <5 years

a) Anaemia status

Anaemia among children under five years old was also high (Figure 5). One in every three children in the survey was anaemic. There were no differences in the rates by ethnicity and gender. However, relatively more children under two years of age (59%) were anaemic, compared to children between three and five years old (24%). By location, Nadi had more children with anaemia (49%) compared with children in Suva and Labasa.¹

Figure 5 Percentage of children <5yrs with anaemia by ethnicity, gender, age group and location, Fiji, 2004

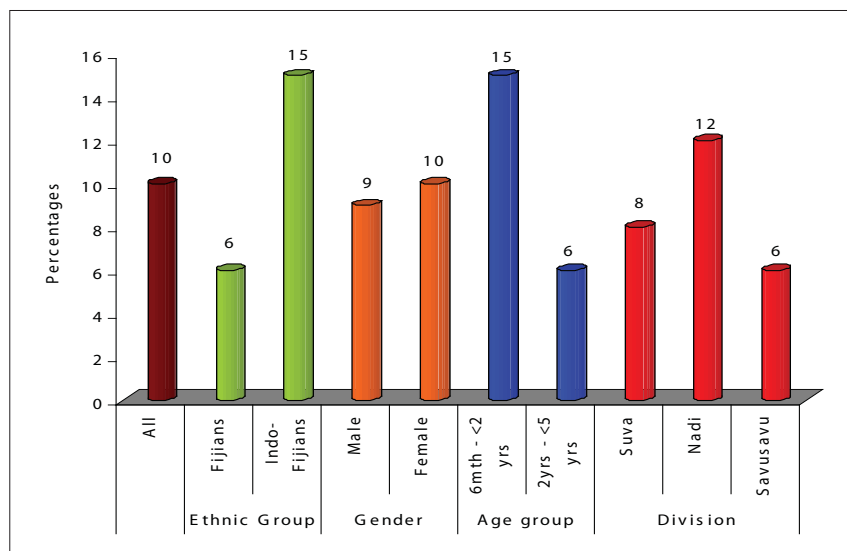


¹ Nadi, Labasa and Suva are three of the biggest towns in Fiji.

b) Iron status

Iron deficiency appeared relatively low compared with anaemia (Figure 6). Indo-Fijian children and all children under two years old had the highest rates (15%).

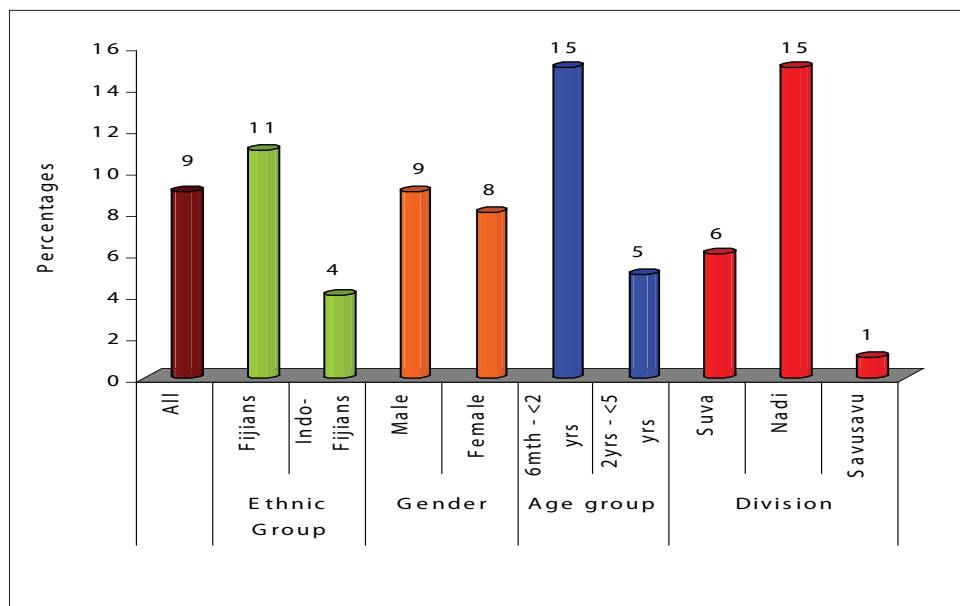
Figure 6 Percentage of children with iron deficiency by ethnicity, gender, age group and location, Fiji, 2004



c) Vitamin A status

Figure 7 shows that 15% of children under two years old were vitamin A deficient. Our analysis also showed that for every ten children surveyed, at least three were at high risk of becoming vitamin A deficient.

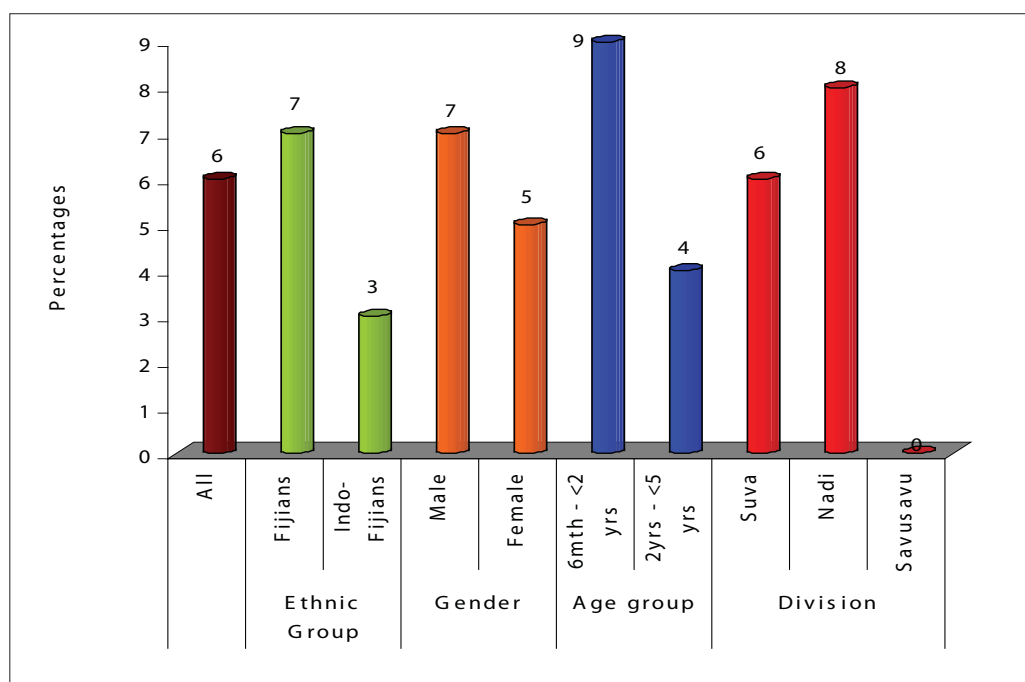
Figure 7 Percentage of children with vitamin A deficiency by ethnicity, gender, age group and location, Fiji, 2004



d) Zinc status

Although zinc deficiency rates among children under five years of age are still less than 10% overall, this deficiency affects their growth, bone development, immune system functioning and utilisation of vitamin A.

It will be noted in Figure 8 that the zinc deficiency rate was below 10%. More Fijian children (7%), male children (7%), children under two years old (9%) and children in Nadi (8%) were zinc deficient.

Figure 8 Percentage of children with zinc deficiency by ethnicity, gender, age group and location, Fiji, 2004

Summary

To summarise the micronutrient situation in Fiji:

- Iron deficiency anaemia is a major public health problem affecting all populations in Fiji.
- Iron deficiency among Indo-Fijian women has consistently been high for decades. These high rates are similar to the overall rate of anaemia reported for women in the Indian continent.
- Iron deficiency anaemia among children under five years of age is also high. Nearly two thirds of children under two years of age surveyed were found to be anaemic.
- Vitamin A is a public health problem in segments of the population, especially among Indo-Fijian women and children below two years of age.
- Fijian women had higher rates of zinc deficiency compared with Indo-Fijian women, making zinc deficiency a problem among Fijian women.
- Some children in certain segments of society, e.g. 8% of children under two years old and 7.8% of children living in Nadi, are at greater risk of a worsening state of zinc deficiency.
- Multiple micronutrient deficiencies exist, more so among Indo-Fijians (15%) than among Fijian women (2.4%), while a large proportion of children between six months and five years of age (about 40%) were seen with multiple micronutrient deficiency.
- Micronutrient deficiency problems are prevalent in the two groups reported in this paper: women of child-bearing age, especially Indo-Fijian women, and children below five years of age.

In many low-income families around the world, undernourished children who survive their first five years are at greater risk of poor growth, along with diminished health and functioning throughout life (Papalia et al. 2007).

Possible contributing factors to the current micronutrient situation in Fiji

A widely-used indicator for food insecurity is the number of persons undernourished or deprived of food used (FAO, 2008), an example of which is people with micronutrient deficiencies.

Contributing factors to the current level of micronutrient problems are many but diet and poverty are major reasons (Web & Block 2004; Zimmermann & Hurrell 2007).

Further analysis of the Fiji data found that micronutrient deficient women:

- consume less food than they should
- show poor choices of food containing micronutrients

- have little variety of micronutrient-rich foods. This is particularly the case among Indo-Fijian women. Dietary iron bio-availability is low in populations consuming plant-based diets
- have low intake of micronutrient-rich fruits and vegetables, i.e. typically one or two serves each day compared to the recommended five serves per day (WHO, 2004)

Deficiencies in young children under five years of age could be attributed to combinations of:

- micronutrient deficits in pregnant mothers
- low weight at birth, an indicator of poor foetal development generally due to poor nutrition of the mother
- shorter period of exclusive breast feeding
- poor quality of complementary foods
- poor sanitation, often resulting in worm infestation.

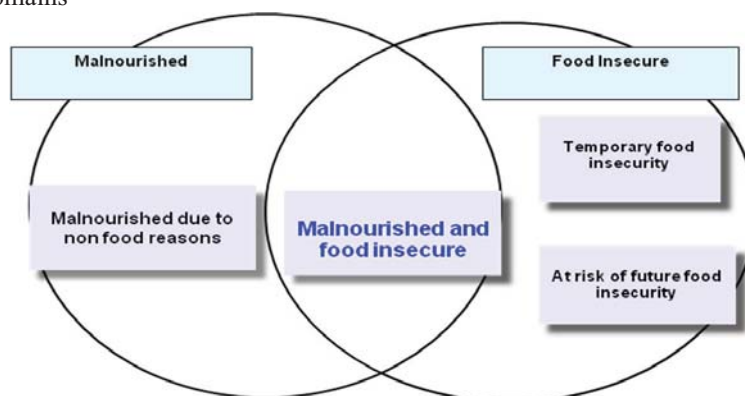
There is strong evidence to suggest that access to food as well as food choices (influenced by culture, religion, convenience and preference) play a major role in influencing micronutrient status (Demment et al. 2003). Globalisation of the food system has also contributed to the current situation, as well as food insecurity due to poverty (lack of income), which is another factor (Schultz 2004).

Micronutrient deficiency: a poverty perspective

Malnutrition can be caused by food insecurity or non-food reasons, e.g. lack of or no education, poverty, prioritising traditional and social obligations, and worm infestation.

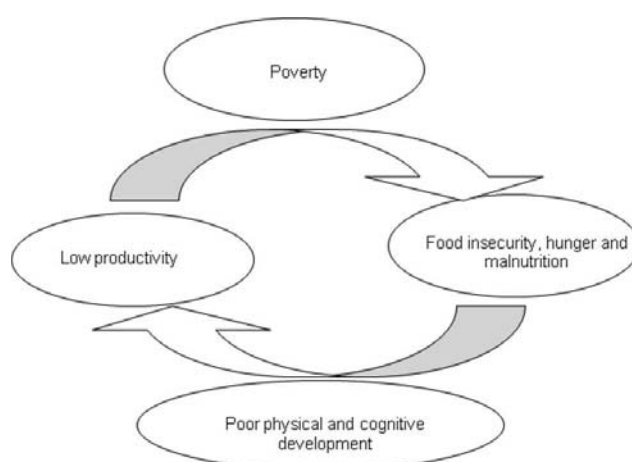
The relationship between malnutrition and food insecurity can be visualized as overlapping domains (Figure 9). It is a complex relationship and can be seen as a vicious cycle (Figure 10) with deeply interrelated phenomena. Attempts to combat malnutrition and food insecurity require that the relationship between them be explicitly taken into account. It is interesting to note that the first Millennium Development Goal is about reducing poverty as well as maintaining a distinct focus on reducing hunger (FAO & EU 2008).

Figure 9 Overlapping domains



Source: FAO & EU 2008

Figure 10 The vicious cycle of food insecurity and poverty



Source: FAO, 2008

Sustainable poverty reduction is an essential precondition for reducing hunger and malnutrition. However, income growth— even if sustainable and equitable—is not sufficient to achieve food security without complementary public interventions (Riely & Mock 1999). What is needed is a combination of income growth, supported by direct nutrition interventions (e.g. backyard gardening) and investments in health, water and education (FAO & EU 2008).

Conclusions

Food insecurity linked to poverty underpins the micronutrient deficiency problem in Fiji.

A relatively high proportion of women and children under five years suffers from deficiency of at least one micronutrient. Indo-Fijian women and children in particular have had a long history of high rates of micronutrient deficiencies in this country.

The literature shows that deficiencies with harmful effects are common in women and children in developing countries, despite global attempts by the WHO and UNICEF to reduce anaemia, iron deficiency, vitamin A deficiency, zinc deficiency and other micronutrient deficiencies; these remain some of the most common preventable nutritional problems.

Further, micronutrient deficiency is an indicator of food insecurity linked to poverty. In addition, there are specific indicator levels for deficits of the main micronutrients, including iron, vitamin A and iodine.

Contributing factors to the situation in Fiji have been attributed to women not eating enough food to meet their needs; little variety in their meals; the food eaten may not be a good source of micronutrients, and a low intake of fruits and vegetables.

In young children, the contributing factors to micronutrient deficiencies are attributed to deficits in pregnant mothers, low birth weight, a short period of exclusive breastfeeding, and poor quality complementary foods.

To address these nutritional micronutrient problems, a combination of strategies is recommended. These include nutrition education, job creation, direct nutrition interventions (e.g. backyard gardening) and other public health investments, provision of safe water, and sustainable food production that is locally affordable.

Recommendations

Priority strategic response suggested for Fiji

“Primary health care, including integrated services at the community level, can help improve health and save lives” (WHO, 2008).

A number of activities to address poverty and micronutrient malnutrition are already happening in Fiji but these must be strengthened. The problem needs to be approached at both the national level and the community/household level.

At the national level

- Implementation and coordination by the NFNC of the multi-sectoral Fiji Plan of Action for Nutrition (National Nutrition Strategic Plan 2010-2014) by all sectors, public, private, NGOs with the support of regional and international organisations. This was recently endorsed by government
- Multi-micronutrient supplementation with dietary interventions
- Development and adoption of the Code of Marketing of breastmilk substitutes to maintain and protect breastfeeding of infants
- A code of conduct related to the advertising of food
- Incorporation of land space for household food production in all urban housing development
- An agricultural policy that includes food production for household consumption
- Proper land use for agriculture
- Reactivation of the Indigenous Affairs policy on food production for household use in the provinces.

At the household level

- Intensive education on choice and consumption of micronutrient-rich food, targeting families (parents and children).
- Promotion of backyard food gardening for home consumption first, and for income generation as a second priority.
- Promotion of the Fiji food-based guidelines in communities to educate people about the importance of adequate, nutritious meals.

Key challenges

Recommendations to improve the micronutrient status in Fiji can only be of value if they are taken on board and implemented by the government; food industries, private businesses, non-government organisations and communities. This can only happen when:

- there is political will, commitment and appropriate resourcing
- clear key outputs of food security as criteria are identified for ongoing assessment; food availability at national level is no guarantee of food and nutrition security at household and individual level;
- the nurturing of close and active partnerships among stakeholders (government, food industries, private businesses, non-government organisations and communities) is done in a coordinated manner. The NFNC has an important role and function in this
- regional and international organisations work with local sectors to pull resources together
- there is facilitation of sustained economic growth that includes specific objectives to genuinely improve nutrition and community welfare.

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The shifting burden of illness in Micronesia

Fran Hezel

The term Micronesia is often used to refer to the islands in the western Pacific just north of the equator but, in this presentation, I use the term to refer principally to the Caroline Islands (comprising what is now the Republic of Palau and the Federated States of Micronesia), and the Marshall Islands. All these islands have a history of political association with the USA that dates back at least to the end of the Second World War. The influence of western society on these islands, however, extends much further into the past—to the mid-nineteenth century, at least, when American whalships began making regular stopovers for rest and refreshment and when American missionaries first brought their Christian message.

The era of the epidemic

Just as Guam and the Marianas underwent a period of disease and depopulation resulting largely from foreign ship traffic in the late 17th and early 18th centuries, so did most of the remainder of Micronesia face the same scourge a century or so later. As western sailing ships reached the islands ever more frequently during the nineteenth century and contact between Micronesians and westerners became more intensive, notable depopulation occurred, owing to the diseases introduced from abroad. There are numerous examples of this. When the American whalship *Delta* came to anchor off Pohnpei in 1854, it put ashore two of its crew members who had contracted smallpox during the voyage and buried another. Pohnpeians promptly stripped the two diseased men of their clothes and, according to one version of the tale, dug up the body of the other. The result was a severe outbreak of the disease, which raged through the island for several months, despite the efforts of an American missionary and physician to control the epidemic. Eventually the disease claimed about 4,000 lives, or about 40% of the island's population.¹

Missionaries' letters from Pohnpei are punctuated with constant references to contagious disease throughout the second half of the 18th century. Albert Sturges, one of the missionaries, refers to 'consumption', or tuberculosis, as 'one of the most common and fatal diseases'.² The letters report outbreaks of one disease or another every few years; influenza was rampant in 1856, 1863, 1866, 1871, 1874 and 1879, while measles outbreaks occurred in 1861 and 1894 (Hanlon 1988: 204). As a result, Pohnpei's population at the end of the century was estimated to be about 5,000, half what it had been in 1840 before foreign disease exacted such a heavy toll on the island.³

At just about the same time, a terrible influenza epidemic broke out on the neighbouring island of Kosrae, killing 300 people. This, as it turned out, was just the beginning of Kosrae's health problems, since one epidemic followed another throughout the mid-1800s with devastating consequences. By the end of the century, Kosrae's population had dropped from 3,000 to a mere 300, so that the island suffered a 90% loss of population in just 40 years (Ritter 1981: 22). This rapid depopulation on Kosrae paralleled the precipitous population decline in the Marianas two centuries earlier, when the number of Chamorros plummeted from 40,000 to 4,000 in an equally short period.⁴ Reports from this period chronicle in some detail the yearly outbreak of what came to be called the 'disease of the ships', the epidemic of influenza or some other communicable disease that inevitably broke out after the arrival of the annual Spanish galleon.

Meanwhile, in the Marshalls, similar disasters were beginning to occur. In 1859, the year in which the first resident foreign traders were landed in the Marshalls, an outbreak of influenza took so many lives that the Marshallese did not know what to do with all the bodies. Missionary accounts tell of people wrapping the bodies in mats and affixing small sails to them before pushing them out to sea to be carried off by the wind. A measles epidemic struck two years later, just as the influenza was recurring, and in 1863 a virulent attack of typhoid fever broke out. Within four years, three epidemics had taken 200 lives on only one or two islands of the Marshalls (Hezel 1983: 206).

1 Two years later smallpox struck Guam and had an equally disastrous effect there. The Guam population, which, before the epidemic, was about as large as Pohnpei's, suffered about the same number of deaths that Pohnpei did.

2 Sturges to Anderson, 16 Aug 1866, ABCFM Letters and Papers, Micronesian Seminar, Pohnpei, FSM.

3 For population estimates of the island at different times during the 19th century, see Saul Riesenberg, *The Native Polity of Ponape* (Washington: Smithsonian Institution, 1968), 6.

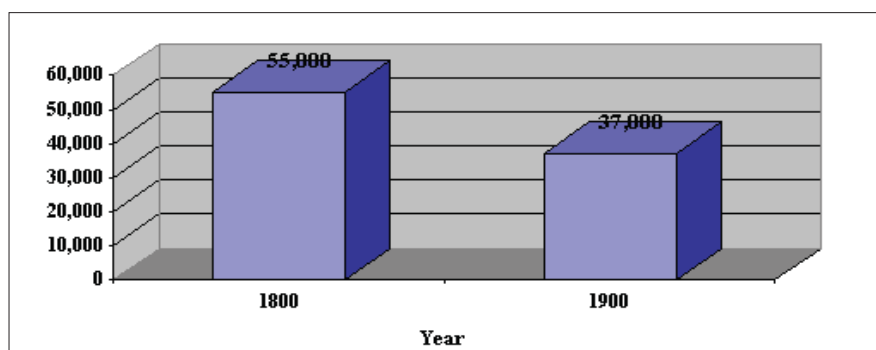
4 The depopulation in the Marianas, because it coincided with a period of long guerrilla warfare between the colonising Spaniards and the islanders, is erroneously attributed even today to guns and powder rather than to the burden of foreign-borne disease to which islanders had developed no bodily defenses. For a discussion of this, see Francis X. Hezel, "From Conversion to Conquest," *Journal of Pacific History*, 17 (1982): 115-137.

Physical deformities of some of the adults, especially on Pohnpei and Kosrae, the two islands that absorbed most of the whaleship traffic from 1840 to 1860, attracted the attention of foreign visitors. One Pohnpeian woman had lost her eyes and half her face, while another man had lost his nose—both were victims of what was in those days called ‘the pox’ (Hezel 1983: 142, 146). Missionaries offered vivid descriptions of the disfigurement that they found nearly everywhere and which they attributed to the prostitution that was rampant on these islands during the heyday of foreign ship layovers.

Even if the symptoms ascribed to the pox were manifestations of yaws rather than syphilis, as early writers often supposed, there is clear evidence that sexually transmitted disease was having a considerable impact on the islands. An abrupt drop in births was noted in many places during those years. ‘There are next to no infants on the island’ a missionary wrote of Kosrae in 1855.⁵ Pohnpei was little better off: in a letter of 1854, Sturges bemoaned the fact that there were only seven births in the last two years.⁶ In Palau, infertility was not as rampant, but still it was cause for concern. One visitor to that island in 1875 wrote: ‘Not two in five women bear children, and two or three children are considered a large family’ (Robertson 1876: 45).

Overall, the intermittent epidemics brought on by contact with foreign ships—mostly influenza, measles, and possibly tuberculosis—were causing an enormous spike in death rates, while the infertility stemming from gonorrhea was depressing the birth rates. Under such conditions, rapid depopulation was inevitable. In Kosrae the depopulation was massive; the island population dropped away from 3000 to 300 in half a century. Meanwhile, Pohnpei lost about half its population, which fell from 10,000 to 5,000 in about the same period. The Marshall Islands dropped from about 13,000 to slightly more than 9000 in less than 30 years. Palau’s population plunged from 8,000 to just over 3,700 by the early 1900s (Hezel 1995: 116, 125). If Chuuk and Yap escaped the worst of the depopulation during this time, it was only because these places were not the desirable ports for foreign ships that other islands in the area were.

Figure 1 Micronesian population, 1800-1900



During the nineteenth century, the population drop in Micronesia can be estimated at between 30% and 40% overall (Figure 1). It was hardly a surprise that westerners, like the German trader Alfred Tetens, were ready to shovel soil on the grave of these island cultures. ‘The weak, deteriorating natives will not be able to resist the advances of civilization. Before long the last Micronesian will have disappeared’, he prophesied (Tetens 1958: 4).

The arrival of western medicine

The annexation of the islands by foreign powers in 1885–1886 initiated a century of colonial rule. Intermittent but frequent contact with westerners during the nineteenth century yielded to regular contact with administrators, teachers and agents of foreign business firms. When the German flag replaced that of Spain in 1899, the first organised attempt to provide health services for islanders was begun. The German administration brought in western medicine, opened the first hospitals in the islands, and stationed doctors on Pohnpei and Chuuk.

From the outset, German authorities recognised the importance of taking measures to prevent the spread of infectious diseases carried by foreign ship crews and passengers. They implemented quarantine measures, first on Yap and then in other island groups as well. The Germans also introduced regular vaccination to the

⁵ Snow to Anderson, 7 July 1855, ABCFM Letters and Papers.

⁶ Sturges to Anderson, 12 July 1854, ABCFM Letters and Papers.

islands, especially to protect against smallpox. By 1906, they could report with little exaggeration that all the western Carolines had been immunised against smallpox and a good start had been made in the islands to the east (German Foreign Office).

A further contribution made at this time was in the diagnosis of the nature of the problems that were afflicting island people. Robert Koch, an eminent medical researcher who paid a visit to Micronesia during this period, discovered that yaws (then known as frambesia) was the cause of the disfiguration and bodily lesions that had long been attributed to syphilis (McKinney 1947: 90). German medical reports show that respiratory diseases, ranging from whooping cough to tuberculosis, had become a common health problem throughout the region. These were regarded as more serious than yaws, ringworm, intestinal parasites and the host of minor diseases that were to be found nearly everywhere (McKinney 1947: 75, 82).

As a result of these efforts, the German administration was able to arrest the population decline everywhere but in Yap, where the fall-off continued for another 50 years.

Japan, which took over the German island possessions in 1914, made further improvements in health services by expanding the hospitals, assigning a permanent medical staff to each major island group, and offering services to the outer atolls on regular field trip visits. The administration also established leper colonies to deal with the growing number of cases of Hansen's Disease. The epidemics that periodically coursed through the islands, taking scores of lives even as late as the early 1900s, were gradually being brought under control. They still came and went—an outbreak of whooping cough that struck Yap in 1925 and another epidemic that took 207 lives in Chuuk the year before—but they were increasingly rare (Japanese Government 1926: 164). The normal case load for the hospitals and dispensaries of this period was intestinal parasites, respiratory disorders and skin diseases. The major causes of death throughout these years were almost equally divided into three general types: infectious diseases, respiratory diseases and what were called disorders in the digestive tract (Japanese Government, 1930: 193). Despite Japanese advances in health services, no real growth in the local population was registered during the 30 years of Japanese rule.

World War II, which ended the period of Japanese administration in the islands, resulted in surprisingly few deaths from military action, everything considered. Ironically, the lasting effects of the wartime privation on the general health of the Micronesian population were far less severe than were the effects of the times of plenty that followed. When the US Navy conducted a health survey of the islands after the war, it found that intestinal parasites, yaws, tuberculosis and skin diseases were widespread. This was not surprising in view of the contaminated water and unsanitary conditions that prevailed. Cases of yaws were easily treated with penicillin, the 'wonder drug' developed during the war, while intestinal parasites could be handled by oral medication. Within a few years of the end of the war, yaws, long an endemic problem in the islands, was virtually eradicated. Overall, their survey 'presented a summary picture of excellent health' (Richard 1957: III 845-855)

The survey team also noted the almost complete absence of malnutrition or obesity—an observation confirmed by the photos taken of islanders, nearly all of whom could be described as well-proportioned and physically fit. The survey found no indication of diabetes. A blood pressure study conducted on Pohnpei during the late 1940s showed almost no hypertension, and it was suspected that the same was true of other islands in the area. An independent survey done in 1947 on Pohnpei revealed that only 9.5% of those tested were hypertensive and that the average blood pressure for all those tested was 111/76 (Murrill 1949: 47-59).

All things considered, the prospects for long-range population growth after years of stagnancy appeared very bright. Already by 1948, the birth rate for the territory had risen to 33 per thousand, while the death rate had dropped to 17. Hence, a population increase of 1.6% yearly could be anticipated over the short term, and the figure would greatly increase over the course of the next three decades. Life expectancy was estimated at 50–55 years for both males and females (US State Department 1949: 76).

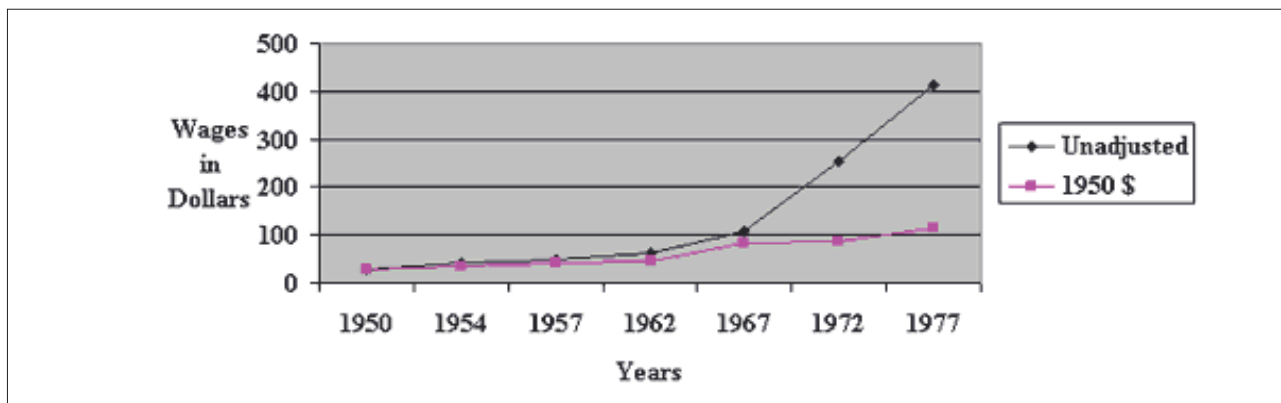
Throughout the next 20 years of slow growth in the US-administered Trust Territory, the health conditions in the islands were largely unchanged. In the early 1960s, when I first arrived in Chuuk, most of the patients at the hospital were being treated for so-called traditional diseases: gastro-intestinal conditions, parasites, respiratory diseases and infections. The Chuuk hospital, like the hospitals in other places, had both a TB ward and a leprosy ward, reflecting two of the major health problems in those days. There were still occasional epidemics, some of them quite serious, like the polio outbreak in the Marshalls in 1962 that left 190 persons crippled, and the measles epidemic in Chuuk a year later that took several lives. Still, it seemed that infectious disease was gradually being brought under control and that at long last the era of the scourge of epidemics was all but over.

The new scourge of affluence

The rapid socio-economic changes dating from the Kennedy Administration in the early 1960s changed the situation, as we would soon learn. The annual US subsidy to the islands, a lean \$6 million in 1962, was doubled and redoubled throughout the remainder of the decade. From \$60 million in 1970, it escalated still higher during the next several years. With the increase in the US subsidy came an expansion in the number of salaried employees—from 3,000 in 1962 to 18,000 fifteen years later. Meanwhile, salaries grew even more rapidly, with per capita Micronesian income rising from \$60 to \$400 during the same period (Figure 2).

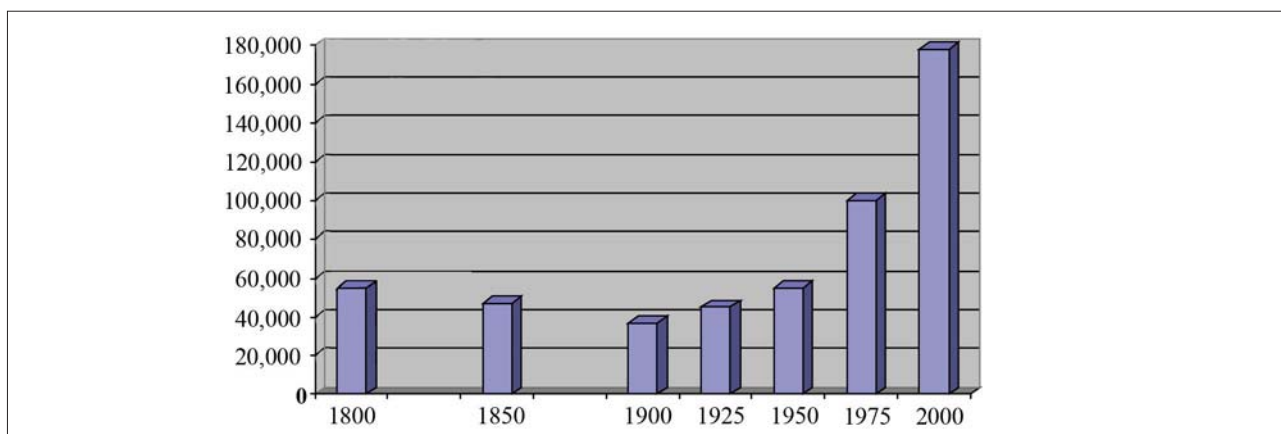
The huge influx of money introduced significant changes in lifestyle, of course. Ships from abroad arrived with increasing frequency, as they had a century before; now, however, they carried not infectious diseases, but cargoes of imported food—food that was once prohibitively expensive but was now affordable to many Micronesians for the first time. These ships also carried pickup trucks and outboard engines, conveniences that made it possible for people to dispense with much of the bodily exercise that had always been such an integral part of island life.

Figure 2 Micronesia per capita income, 1950–1977 (in adjusted 1950 dollars)



Meanwhile, the birth rate had been rapidly increasing since the end of the war, reaching 40 per thousand by 1966. Even Yap, which had been in a long population decline up to World War II, recovered and began to show an increase in the 1967 census. Consequently, population growth rose to well over 3% yearly, reaching as high as 4% in the Marshalls by 1980. The population was growing rapidly, and health planners were soon as concerned about keeping it under control as they were about handling the normal burden of disease they faced (Figure 3).

Figure 3 Micronesian population, 1800–2000



Yet a new set of health problems was beginning to surface. The records for treatment in hospitals and dispensaries, however incomplete they might be, give a clear indication of the direction in which the burden of disease was headed throughout the remainder of the Trust Territory years and afterwards. The annual report for 1956 recorded just eight cases of diabetes treated throughout the territory. By 1976 the number had expanded to 522 (Table 1).

The incidence of heart and circulatory problems—which would include hypertension and heart disease—grew even faster. In 1956, as Table 1 shows, there were 192 visits to the hospitals and dispensaries for treatment of these problems. By 1976, the visits had increased to 1,494. By contrast, the number of patients seen for treatment for chicken-pox, measles, and gonorrhea held steady or declined during the same twenty-year period. The health department records may not have been complete enough to yield robust figures on morbidity, but they certainly were indicative of trends during those years.

Table 1 Treatment in TT hospitals and dispensaries for diabetes and heart and circulatory disease, 1956–1976

Year	Diabetes	Heart and circulatory problems
1956	8	192
1966	280	1,082
1976	522	1,494

Source: TT Annual Reports for 1956, 1966, and 1976

As the local diet changed, new nutritional problems surfaced. Infant malnutrition seemed to be a more common occurrence, perhaps partly owing to the growing popularity of bottle-feeding. Parents or care-givers unfamiliar with the nutritional needs of small children were cutting the formula for powdered milk to save money or substituting punch or Kool-Aid for milk. Others were replacing the healthy local foods once fed to children with white rice or junk food. Vitamin A deficiency was found to be a common condition in children, especially in Chuuk and Pohnpei. Doctors everywhere were soon recording abnormally low weights of infants.

Infants might have been smaller, but adults were becoming larger than ever, thanks to the shift toward a high-sodium, high-fat diet bulked up by less nutritious carbohydrates such as white rice. In the years following the rescinding of the ban on alcohol in 1960, after-work and weekend drinking became a popular recreation for many islanders. This, of course, only added to the new disease burden—non-communicable diseases (NCDs)—that would become an ever larger health threat as the years passed.

The Chronic Disease Survey done in three of the Federated States of Micronesia in 1994 revealed how large a percentage of the population in these three places was suffering from diabetes and/or hypertension (Table 2). According to the survey, hypertension rates among Micronesians of these three island groups in the 45–55 age group ran to about 45%, well above the 29% that is recorded for the USA population.

Table 2 Chronic Disease Survey, FSM 1994

Age	Overweight (% of population)				Diabetes (% of population)				Hypertension (% of population)			
	Kosr	Chk	Pohn	USA	Kosr	Chk	Pohn	USA	Kosr	Chk	Pohn	USA
35–44	78	80	84	36	7	9	14	--	24	34	24	16
45–54	84	79	84	39	21	22	19	8	40	48	45	29
55–64	79	68	71	44	33	18	21	13	51	57	55	47
65–74	5	53	67	41	9	9	21	19	50	65	71	58

Source: S. B. Auerbach’s survey of 1500 people in Chuuk, 600 adults on Kosrae, and 600 adults in Sokehs, Pohnpei.

Note: “Overweight” = BMI>27.8 (males), BMI>27.3 (females). “Diabetes”= OGTT>200. “Hypertension”=BP(sys)>140B P(dis)>90. Joseph Flear, Summary of the Health Priority Seminars, 1998.

Diabetes has become an even larger health problem in the islands, at least when compared with the USA. The FSM diabetes rate of about 20% for the age group 45–55 is more than double the USA rate of 8% for the same group. Rates are even higher in certain island groups: the Kosrae rate for the 55–65 age cohort is over 30%, and in the Marshalls 30% of all those over the age of 15 show signs of the disease (Diaz 1997: 116–129). Two of the consequences of the disease have been apparent lately; death due to renal failure has been on the rise, as

have limb amputations. There is no doubt that the ‘sugar sickness’, as islanders call it, is one of the major health problems in the islands.

It would appear that changing lifestyle patterns during this age of affluence have been largely responsible for the increase in those NCDs that might be termed the Big Three: diabetes, heart problems and stroke. All three are linked with obesity, which has become a serious concern in the islands today. About 80% of FSM citizens aged 35–54 screened in the survey tested as overweight. This is more than double the rate of 38% overweight found in this age cohort of the USA, a country that is itself vexed with the problem of obesity. Life expectancy for Micronesians, after all, is close to 65 years—a full ten years lower than in the USA.

The toll that diabetes, hypertension and stroke is taking on the Micronesian population may be gauged by referring to table 3, which shows the percentage of all recorded deaths due to NCDs during the six-year period (1991–1996). Overall, the three life-style diseases—diabetes, hypertension and stroke—accounted for 46% of all adult (i.e. five years or older) deaths during this period. Cancer deaths represented another 17% of the total. Non-communicable diseases, then, were responsible for nearly two-thirds of the deaths during those years, while heart disease, stroke and diabetes caused nearly half of all adult deaths.

Deaths attributed to diabetes were especially high in Kosrae (24%) and in the Marshalls (18%). Heart disease accounted for one-fourth of all the recorded deaths throughout the islands during this time period. Figures were especially high for Pohnpei (30%) and Chuuk (26%). Stroke was responsible for between 7% and 11% of the recorded deaths.

Table 3 Major causes of death as a percentage of all adult deaths, 1991–1996

	Yap	Kosrae	Chuuk	Pohnpei	Marshalls	All Islands
Diabetes	6	24	9	7	18	13
Heart	12	20	26	30	14	24
Stroke	10	12	7	11	7	9
Cancer	23	16	15	13	16	17
Total	51	72	57	61	55	63

Note: Figures for Yap include 1991–1995 only; figures for Marshalls include 1994–1997. No data for Palau available.

Source: Joseph Flear, Summary of the Health Priority Seminars, 1998.

Overall, the data for this period suggest that NCDs account for roughly half of the mortality throughout the islands today. This represents a striking reversal of early patterns of deadly disease in Micronesia, dating from the nineteenth century until after World War II, when infectious diseases claimed the greatest death toll.

Summary

In our review of health and illness in Micronesia, we have witnessed two stages of disease burden corresponding to the classical division worldwide. The first stage, which began with foreign contact and continued through the years following World War II, could be called the First Generation. These older Micronesians, still rooted very much to the land and producing their own food for the most part, had the health problems of any traditional society: infectious diseases, respiratory illnesses, gastro-intestinal disorders and the problems associated with poor sanitation. The post-war babies who were raised on Spam and rice comprise the Second Generation. This is the generation, rather well-off when compared with their parents, that suffers from heart disease, stroke and diabetes.

If the change in lifestyle and diet brought on by the relative affluence of the post-1960s era constituted a serious health risk, many of the traditional island practices and attitudes only compounded the problem. To walk for exercise when one could ride by taxi or motorboat was looked on as silly. Even those who felt the need for regular exercise were inhibited by the local disdain for physical exertion. Micronesians would have agreed fully with Asians that only ‘mad dogs and Englishmen’ (read ‘Americans’ here) would venture out in the noonday sun, especially for something as ridiculous as exercise.

The traditional attitude to food stemmed from the ‘feast or famine’ lifestyle of a society of hunters and gatherers. The genetic predisposition of islanders to diabetes may stem from the same source, at least if you embrace the ‘thrifty gene’ theory. Certainly the cultural mindset—that is, eat it up today while it is here, for tomorrow there may be nothing to eat—did not encourage abstemious eating habits. Food, for the Micronesian, fell into two categories: starch and protein (mwongo and seeni, in Chuukese and related languages). Vegetables were not normally eaten as a separate dish, but carbohydrates such as taro or sweet potatoes might be wrapped in taro leaves and cooked with greens. With the transfer to western foods, lunch could consist of a can of corned beef or Spam and a large bowl of rice with soy sauce. This was, in local thinking, a balanced diet, even if no other food groups were represented.

As Micronesians put on more pounds, figures filled out and bellies became rounder but there was initially no cry of dismay from oversized islanders as they looked at themselves in the mirror. Pacific Islanders, like Europeans of a former age, regarded corpulence as a symbol of prosperity. Chiefs, by virtue of their title, were supposed to eat well and engage in little physical labour (as their uncalled hands might testify). Fleshiness was not just a symbol of prosperity, but a sign of beauty as well. The predilection of islanders everywhere in Micronesia did not seem to run toward spindly-legged women with anorexic figures, as foreigners have noticed.

So it is that we find ourselves in our paradoxical situation today with regard to islander body size. On the one hand, many infants are showing abnormally low weights in early childhood. On the other hand, an increasing number of adults are overweight, with many plainly obese.

What might we start in our attempts to address this problem? These are a few recommendations that might be considered.

- Find out where we stand regarding NCDs. Provide updated survey samples of obesity, hold blood sugar and hypertension surveys. Use the same standards throughout the Pacific so that figures can be compared. The WHO might be asked to coordinate such surveys.
- Undertake an education campaign to inform the public of the dangers of the major NCDs: heart disease, diabetes and stroke. This campaign should draw on a variety of different types of educational materials: videos, posters, radio spots and print materials, such as brochures in local languages. Encouraging people to grow and eat local food is a good start, but the campaign should go much further than this. It should address the food question (moderate amounts; choice of low-salt, low-fat and low-sugar foods; and method of cooking), but also publicise the importance of moderate, regular exercise and explain the symptoms of the NCDs and their effects on the body.
- The UN and other regional agencies should compile a list of public education materials produced in and for the Pacific that might be shared for such a public education campaign. Each country need not produce its own materials from scratch, when many such materials exist that could be effectively used throughout the region.
- It might help to mount a regional effort for such a public education campaign on NCDs and their impact on our populations. This could be coordinated out of an office in Fiji or Hawai‘i (much as Papa Ola Lokahi in Hawai‘i ran the Pacific Diabetes Awareness programme for many years).
- For the problem of infant malnutrition, we might begin with an easy-to-read brochure in English that describes the problem and tells people how to avoid it.

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A health system's perspective on achieving ICPD goals in the Pacific

Joel Negin

The Programme of Action that resulted from the International Conference on Population and Development (ICPD) held in Cairo in 1994 included recommendations in an extremely wide range of fields such as population, gender equality, economic growth, reproductive health, mortality, education, migration and urbanisation (UNFPA, 1994). With regard to the health sector alone, ICPD emphasises action in areas ranging from gender-based violence to nutrition, obesity to sexually transmitted infections. The multi-sectoral emphasis is important and acknowledges the complexity of achieving sustainable development.

Globally and in the Pacific region, there are many experts who focus on each of these health sub-areas and who have contributed to attempting to further achievement of the ICPD goals. In the Pacific, UN agencies, aid agencies and non-governmental organisations have been set up to address some component of the ICPD health challenge. For example, UNAIDS focuses on AIDS and the Secretariat of the Pacific Community is addressing obesity in partnership with the WHO. The increasing amount of attention and funding (IHME, 2009) being given to health over the past decade is laudable and much needed.

Wide as the range of ICPD recommendations is, a very important component is missing from the ICPD agenda that is critical to the achievement of not only the ICPD goals but also the overlapping Millennium Development Goals—health systems. The international health community is now starting to understand that functioning health systems serve as the foundation stones for effective action against a wide range of health-related goals.

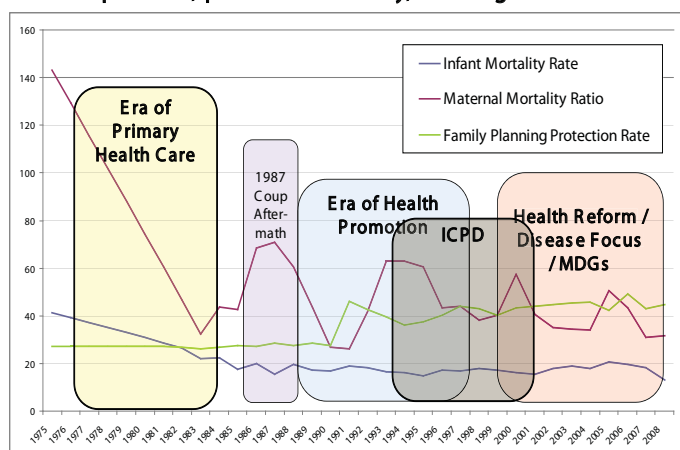
The WHO and others have increasingly been emphasising the importance of health systems (WHO, 2007; Reich, Takemi, Roberts & Hsiao, 2008; Travis, Bennet & Haines et al., 2004) and international organisations such as the Global Fund and the Global Alliance for Vaccines and Immunisation (GAVI) have been attempting to support them as part of their funding. These efforts are much needed globally and in the Pacific. This paper aims to highlight some of the health systems issues that can limit or, conversely, can launch forward progress towards achievement of ICPD goals in the Pacific.

Health policies and achieving ICPD goals

Over the course of the last few decades, there has been a proliferation of health sector policies ranging from Primary Health Care to UNICEF's GOBI (growth, oral rehydration, breastfeeding, immunisation) to health promotion to health sector reform to the Millennium Development Goals (Negin, Roberts & Lingam, 2010). ICPD has been another one of these policies that have emerged with some financial support. Amidst all these policies, have they had a real impact on key health indicators such as infant or maternal mortality? A glance at three primary ICPD indicators for Fiji—infant mortality rate, maternal mortality ratio and family planning protection rate—reveal that the various health sector policies have not, by themselves, had a discernible impact on those critical indicators (Figure 1).

Figure 1 Primary health indicators in Fiji, 1975-2008

Many explanatory factors for changes in health indicators
Health policies, political economy, funding...



Notes: Infant mortality rate per 1000 live births; maternal mortality ratio per 100,000 live births; family planning protection rate as a percentage of women. Data for some years were not available and were estimated based on linear progression.

Sources: Fiji Ministry of Health Annual Reports 1994; 1996, 1998, 1999, 2000, 2006, 2008. Adapted from Negin J, Roberts G, Lingam D., 2010.

Health systems

If the various health policies have not had a clear impact on health indicators, the obvious question is: why not? A number of possibilities exist but this paper contends that one of the main reasons has been the relative neglect of health systems.

The WHO defines a health system as follows:

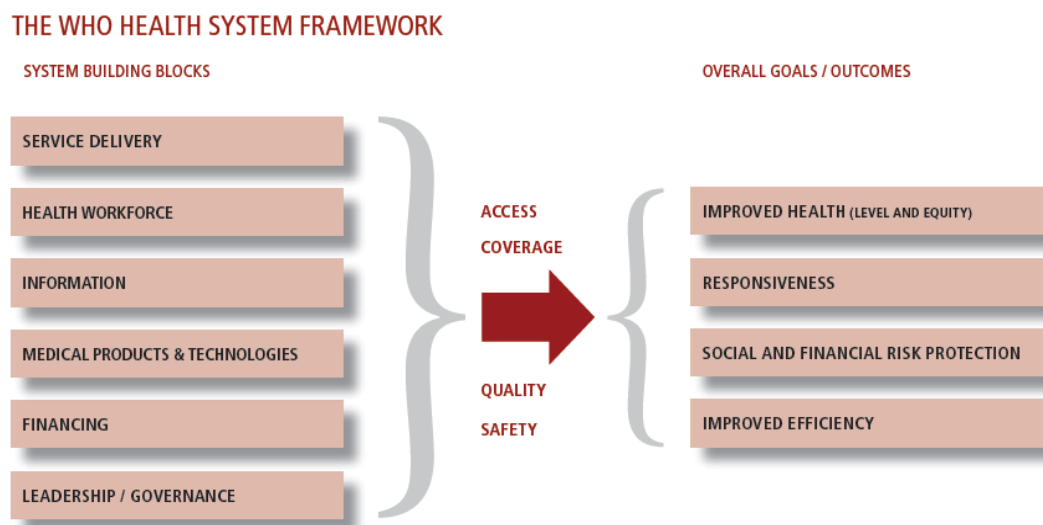
A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health. A health system is more than the pyramid of publicly owned facilities that deliver personal health services (WHO, 2007).

Health systems are thus wide ranging and multi-faceted. An article in *The Lancet* describes a fully functioning health system as requiring a number of components:

The institutions and individuals that deliver both preventative and curative health-care services have to be organised to function efficiently and effectively. Supplies have to arrive, equipment has to be maintained, staff have to be present at their posts and appropriately trained to perform their functions. Finance, budgetary, and payment systems have to generate the proper incentives, and regulatory activities have to function with integrity. Competent managers and appropriate reporting systems are needed. (Reich et al., 2008)

The WHO developed a health systems framework in 2007 that outlined six building blocks of an effective health system. They include service delivery, health workforce, information systems, medical products, financing and leadership / governance (Figure 2).

Figure 2 WHO Health System Framework



Source: WHO, 2007

Each of these building blocks is seen as critical to achieving health systems goals and outcomes which are identified as: improved health, responsiveness, social and financial risk protection, and improved efficiency.

Part of the reason for limited success in meeting the ICPD goals in the Pacific comes down to weak health systems that are limited by a range of systems issues including shortages of health workers, service delivery challenges over dispersed islands and insufficient financing. A number of the building blocks will be touched on to suggest how improvements in health systems can contribute to the achievement of ICPD goals.

Human resources for health

A clear area of weakness for health systems in the Pacific is the shortage of human resources. Throughout the region, there are shortages of nurses and doctors, especially in rural and remote areas (UNSW, 2009). Using

Fiji as a specific case, instability and insufficient pay and opportunity have led to the departure of significant numbers of staff. Following the coup of 2000, 30 general practitioners left the country (Sharma, 2002). From 2003 to 2007, 160 medical officers and 545 nurses exited the public health system, going either overseas or into the private sector (Sutton, Roberts & Lingam, 2008). By 2008, 36 per cent of senior medical posts were vacant, and 120 medical officers (25 per cent of the total medical workforce) were in private practice (Tables 1 and 2).

Table 1 Fiji MoH medical cadre as at 31/10/08

Post	Grade	Approved Establishment	Filled	Vacant
Consultant Specialist	MD01	35	22	13
Chief Medical Officer	MD02	25	18	7
Principal Medical Officer	MD03	44	32	12
Senior Medical Officer	MD04	79	46	33
Medical Officer	MD05	168	170	+2
Medical Intern	MD06	35	49	+14
Medical Assistant	MD07	10	10	Nil
Total		396	347	49

Source, Sutton, Roberts & Lingam, 2008

Table 2 'Exit' of staff from Fiji MoH 2003–2007

Cadre	2003	2004	2005	2006	2007	Total	Av.p.a.
Medical Officers	29	40	37	31	23	160	32
Nurses	25	64	162	216	78	545	109
Paramedical	15	15	19	19	13	81	16
Dental	4	4	13	10	5	36	7
Pharmacy	4	3	18	8	8	41	8
Total	77	126	249	284	127	863	173

Source, Sutton, Roberts & Lingam, 2008

One of the primary causes of shortages of health workers across the Pacific has been outward migration of health workers to Australia and New Zealand and beyond. A 2008 study revealed that a large number of Pacific-born health workers were working in Australia and New Zealand and, in some cases, there are more Pacific-born health workers in those two countries than there are in the domestic workforce (Tables 3 and 4) (Negin, 2008).

Table 3 and 4 Pacific-born doctors and nurses in Australia and New Zealand by country relative to the domestic workforce

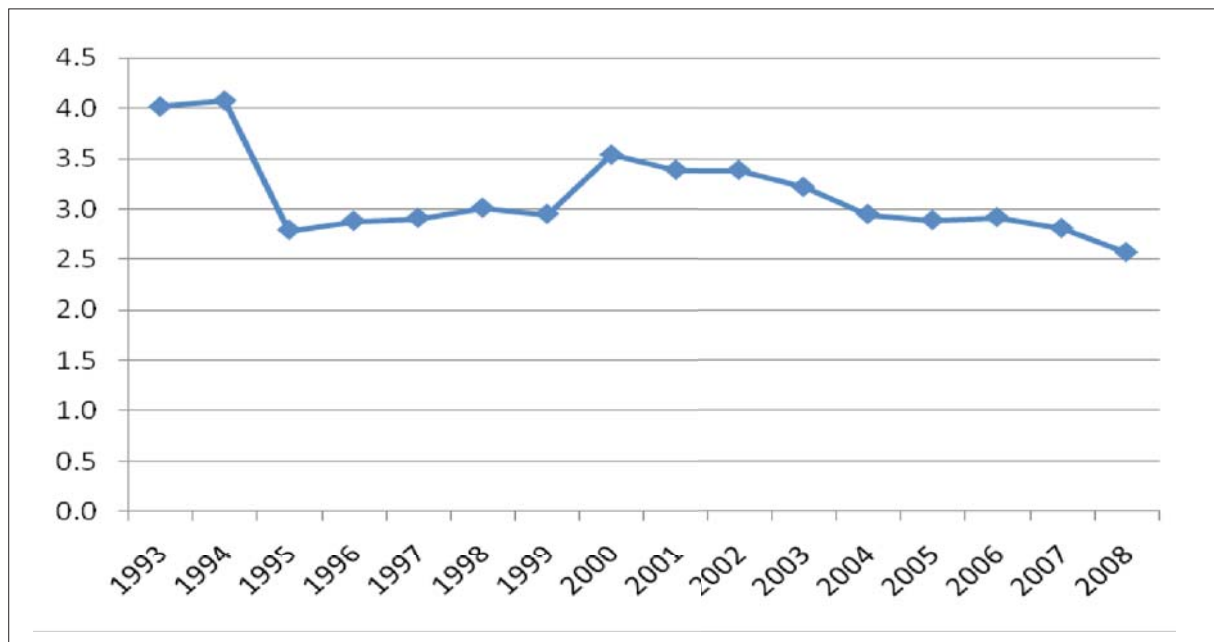
Doctors	Aus & NZ	Domestic	% in Aus & NZ relative to domestic	Nurses & Midwives	Aus & NZ	Domestic	% in Aus & NZ relative to domestic
Niue	7	4	175.0%	Niue	47	22	213.6%
Fiji	361	380	95.0%	Samoa	469	310	151.3%
Tonga	26	30	86.7%	Tonga	421	350	120.3%
Samoa	42	50	84.0%	Fiji	1828	1660	110.1%
Cook Islands	12	20	60.0%	Cook Islands	77	80	96.3%
Papua New Guinea	160	275	58.2%	Nauru	12	63	19.0%
Nauru	4	10	40.0%	Papua New Guinea	441	2841	15.5%
Kiribati	6	20	30.0%	Tuvalu	7	50	14.0%
Tuvalu	3	10	30.0%	Vanuatu	30	360	8.3%
Solomon Islands	12	60	20.0%	Kiribati	18	260	6.9%
Vanuatu	4	30	13.3%	Solomon Islands	37	653	5.7%
East Timor	8	79	10.1%	East Timor	48	1795	2.7%
Micronesia	0	60	0.0%	Micronesia	0	250	0.0%
Palau	0	30	0.0%	Marshall Islands	0	152	0.0%
Marshall Islands	0	24	0.0%	Palau	0	121	0.0%

Human resources for health are not explicitly addressed in the outcome-focused ICPD goals, yet attention is needed in this area in order to achieve positive traction. Until this area is highlighted by ICPD actors and stakeholders, the goals might remain unachievable.

Health financing

Another health system challenge that limits achievement of health sector goals is in the area of health financing. Again using Fiji data, despite annual increases in health spending in dollar terms, the proportion of GDP allocated to the Ministry of Health budget for the national public health system has fallen from 4% to 2.6% over the last 15 years (figure 3). This allocation is the lowest among regional neighbours.

Figure 3 Fiji Ministry of Health budget as a percentage of GDP



Source: Fiji Central Bureau of Statistics

Additionally in Fiji, the allocation of funds has been moving away from primary health care and nursing stations towards sub-divisional hospitals and urban hospitals, possibly reducing the efficacy of preventive outreach services (Negin, Roberts & Lingam 2010).

Health information systems

An additional challenge to the achievement of ICPD goals is the weakness of health information systems in the region. There is a lack of solid reliable data on morbidity and mortality, thus limiting evidence-based planning and strategic allocations of funding and resources.

Leadership and governance

One of the most significant challenges facing the health sector globally is the proliferation of policies, declarations and priorities that have diffused the attention of governments and donors across a wide range of activities. During 2009 interviews, a number of Pacific health stakeholders lamented the many “fads” that were of the highest priority for one or two years before being superseded by another highest priority (Negin, Roberts & Lingam 2010). The lack of continuity impacted negatively on sustained health sector development.

There needs to be greater domestic ownership of development priorities rather than the donor-driven “faddism” that has dominated. This is in line with the Paris Declaration and Accra Agenda for Action which both highlight the importance of country ownership.

The way forward

Greater focus on health systems as essential to health sector improvement is now emerging globally and in the Pacific. Over the past few years, a number of groups have come together to emphasise action on health systems in the region. The Pacific Public Health Surveillance Network and the Pacific Health Information Network are both working to strengthen health information systems. The Pacific Human Resources for Health Alliance partners with countries to develop health workforce planning. And the Asian Development Bank, World Bank and partners are building Pacific capacity to produce National Health Accounts that can provide a much needed evidence base for financial decisions.

Health systems are finally on the agenda in the Pacific. This new emphasis will undoubtedly support the achievement of the various multi-faceted ICPD goals and, more importantly, will serve to strengthen Pacific countries' ability to address national health priorities for years to come.

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Physical activity, nutrition, population health and social sustainability in the Pacific

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The major causes of early death have shifted from communicable, infectious diseases to lifestyle-related conditions (Corbin, Lindsey & Welk 2000). In Pacific Island countries and territories (PICTs), the shift is from measles, pneumonia, influenza and smallpox to heart disease, diabetes, cancer and stroke. In several PICTs, the prevalence rate for diabetes is among the highest in the world. Hypertension in at least seven PICTs exceeds western rates, and heart or circulatory diseases are the leading causes of mortality in the majority of PICTs (Coyne 2000). Lack of regular physical activity and poor diet are major risk factors associated with these lifestyle, non-communicable and chronic diseases. Obesity, tobacco use and alcohol abuse are other risk factors.

The paper begins by discussing the place population health has in the sustainability debate. Importantly, it shows that Pacific Islanders were traditionally seen to be active, strong and robust, living on a diet that sustained them for years prior to contact with the western world. Changes in activity level and dietary patterns have exposed many Pacific Islanders to chronic lifestyle diseases. This paper argues that current rates of these diseases pose a serious threat to the social sustainability of Pacific communities. The paper ends by discussing issues that PICTs need to consider in attempting to fight non-communicable diseases.

Sustainability's bottom line is population health

Sustainable development is predominantly viewed from an ecological perspective, where environmental concerns are the main focus. Important also, however, is the social sustainability perspective, linking issues that threaten harmony in the social fabric of society (Heng 2006). This chapter also draws from alternative views of sustainability such as *sustainability as indigenous* which advocates empowering indigenous peoples to reformulate principles in which they would operate. This is pertinent as indigenous populations come under stress as a result of global modernisation (Petrucchi 2002).

The very high non-communicable disease (NCD) rates in PICTs are a threat to the social fabric of Pacific Island societies. There needs to be individual and collective consciousness and responsibility and supportive environments to enable Pacific populations to access nutritious foods, including local foods that sustained Pacific Islanders for millennia. Pacific Island nations need to be serious and passionate about the promotion of values and practices that can sustain Pacific children's livelihoods in the future.

Human population health is a genuine marker of sustainability. The current high prevalence of obesity and chronic diseases is not the result of genetic changes but social and environmental changes, especially in the patterns of physical activity and socially-patterned diets. The health profile of a population is determined by the way a society's culture and habitat interact with the wider environment. This interaction, over time, shifts the patterns of population disease (McMichael 2002). Sustainability is about maintaining the complex systems that support health and life, and so population health should be a long-term sustainable social goal (McMichael 2006). Noteworthy from pre-contact anthropological accounts, is the fact that Pacific Islanders have lived a sustainable lifestyle for thousands of years (Hunter-Anderson 2004).

The introduction of infectious diseases to Pacific populations

One of the first navigators to come to the Pacific Islands was Spaniard Ferdinand Magellan, who, in 1521, landed on Guam. Many explorers, traders, and missionaries followed. From their accounts, there is no reliable evidence to suggest that there were widespread epidemic diseases in the Pacific Islands prior to outside contact, protected as they were by their isolation. The first Europeans to sail to the Pacific Islands described the health and physique of Islanders in positive terms. Captain James Cook, who made three voyages between 1768 and 1780, visiting Tahiti, Tonga, the Cook Islands, Vanuatu and New Caledonia, described the islanders thus (Coyne 2000: 3–4):

Tahiti

With respect to their persons, the men in general are tall, strong limb'd and well shaped, one of the tallest we saw measured six feet three inches and a half

They have all white teeth.

Tonga

.....they seemed to be as free from disease as any Nation whatever, I neither saw a sick or a lame person among them, all appeared healthy and strong, a proof of the goodness of the climate in which they live.

New Caledonia

.....its inhabitants ... are strong, robust, active, well made people.

Cook Islands

Many of the young men were perfect models in shape and all had a remarkable smoothness of the skin.

These quotations indicate that the Pacific Islands were probably extensively free from epidemic infections. They also depict strong, active and mostly healthy Pacific Island populations. However, infectious diseases cannot be completely absent where humans live. For example, yaws was said to be endemic in many islands before the arrival of Europeans. Also, malaria was likely to have been present prior to European contact, its carrier mosquito migrating from Asia, through Papua New Guinea and thence to Solomon Islands. In the late 16th century, a disease that could have been malaria killed explorer Alvaro de Mendana and many of his men. Tuberculosis may also have been present on pockets of island groups in pre-European times (Miles 1997).

Knowledge of communicable diseases prevailing before European contact is fragmentary, but what happened after such contact is well documented. Pacific Islanders had little resistance to introduced disease. In 1838, Williams, a missionary in Rarotonga, wrote that most of the diseases that raged in the islands—epidemics of influenza, measles, smallpox, tuberculosis, dysentery and whooping cough—were introduced by ships (Miles 1997). In January 1875, HMS Dido brought measles to Fiji and by the time the virus disappeared in June, a quarter of the population had perished. This was considered one of the worst tragedies in Pacific history (Cliff & Haggett 1985).

An influenza epidemic attacked Samoa in 1830, introduced by the missionary sailing ship, *Messenger of Peace*. In 1848, Samoa was affected by a whooping cough epidemic, mumps in 1850, and measles in 1893. An American vessel on her way from New South Wales to San Francisco introduced a measles epidemic to French Polynesia in 1854, and around 1000 people died in Tonga from a measles epidemic in 1893, introduced by a New Zealand vessel (Cliff & Haggett 1985). Influenza and leprosy epidemics took their toll in Papua New Guinea, while tuberculosis was a major problem throughout the islands (Wilde 1972).

By the beginning of the 20th century, the population of many Pacific Islands was drastically reduced due to infectious epidemics and blackbirding (recruitment of people through trickery and kidnapping to work on plantations, particularly the sugar plantations of Queensland and Fiji) (Coyne 2000). The population in Rapanui was about 3000 in 1862, but by 1877 only 110 remained due to Peruvian blackbirding, smallpox and tuberculosis (Miles 1997). Sugar and cotton plantations in Queensland and Fiji were destinations for many islanders taken by blackbirders. By 1876, 13,000 recruits had been taken from Vanuatu; 30,000 from Solomon Islands by 1911; 9,000 I-Kiribati by 1860 (Coyne, 2000); and between 1862 and 1863, Peruvian blackbirders had killed several and taken away 100 Niueans (Miles, 1997).

Traditional Pacific food and diet

In the Pacific, root crops have been the staple for millennia. In Buka Island, Bougainville and Papua New Guinea, for example, 28,000 years old scrapings of taro and sweet potato have been found. At Truk, Federated States of Micronesia, the traditional diet consisted of fish, taro, yams, breadfruit, tapioca, banana, coconuts, fruits (e.g. mangoes, papayas and guavas) and leafy vegetables. In Tuvalu, before western influence, the customary diet consisted of fish, coconut, breadfruit, taro, banana and puluka (a variety of taro). In Vanuatu, the traditional diet was mainly root crops, green leaves, coconut and fruits in season (WHO 2003a).

Since western contact, however, Pacific people have become more reliant on imported food. The most commonly imported foods providing fat have shifted to oil, margarine, butter, frozen and tinned meat, and tinned fish. The single biggest increase in meat is the importation of chicken, relatively high in fat. In terms of energy foods, the largest providers now are cereal products of white rice and flour. From being traditionally 'subsistence affluent'—and indigenous Pacific languages do not have a word for malnutrition—they are now in a state of food dependency or 'dietary colonialism'.

Food in the Pacific Islands is used as a means of strengthening social ties. The way food is prepared and the types of food eaten provide cultural identity. On official occasions, community leaders and chiefs are fed first and given the best foods. A 'big' body size in many Pacific Islands is a symbol of health, well-being, status, strength and beauty (SPC 2002; WHO 2002a), although it may not conform to western ideas. The fact remains, however, that the uncontrolled intake of fatty and processed food and carbonated drinks, and the change of traditional dietary patterns to food of lower value have caused the prevalence of NCDs to be high in PICTs.

The shift to non-communicable diseases

The Pacific Islands

Public health programmes in the early decades of the 20th century arrested the decline in population, and controlled communicable diseases. However, a shift occurred from communicable to non-communicable diseases. Between 1962 and 1963, Prior, Harvey, Neave and Davidson (1960) compared the health of two Cook Islands population. They found a very high incidence of obesity at Rarotonga, especially among the female population, whereas it was virtually non-existent in rural Pukapuka. One of the reasons they suggested for this was the fact that the people of Pukapuka had to do physical work, such as growing and tending taro plantations, which protected them from the lifestyle diseases found in Rarotonga, such as atherosclerosis, hypertension, and chest pains. This rural-urban difference of the 1960s has continued. A survey in Fiji (Qalo 2004) showed that rural dwellers are less likely to suffer from heart attacks, obesity and diabetes because farming gives them exercise.

Obesity is the most powerful risk factor for diabetes, created by excessive caloric intake and physical inactivity. Traditional diets of staple root vegetables (sweet potato, taro, yams, cassava) that are high in fibre and rich in starch, are increasingly replaced by processed food, low in fibre. Nauru has a diabetes prevalence rate of 34.4%, one of the highest in the world (Coyne 2000; Serjeantson 1989; WHO 2003b). This contrasts dramatically with Nauru's health reports from 1923 to 1966, which record only one case of diabetes in 1937. Diabetes is not only a Nauru problem; Micronesia as a whole has higher rates than Polynesia, and Polynesian rates are higher than those in Melanesia (Serjeantson 1989). While ranked comparatively low in the Pacific region, Solomon Islands regards diabetes as the 'killer disease' ahead of malaria, and it is the major cause of admission at the surgical ward all year round. Furthermore, an increasing number of children are diagnosed with diabetes (Marau 2007a).

Rates of diabetes are nine to ten times higher in many PICTs than in western countries (Coyne 2000; WHO 2003b). Even more worrying is the fact that Micronesian and Polynesian countries were eight of the top ten most obese countries in the world in 2007. Ranked in order of the most obese respectively were: Nauru, Federated States of Micronesia, Cook Islands, Tonga, Niue, Samoa and Palau. Kiribati ranked tenth (Streib 2007). This is serious and requires vigorous and appropriate intervention.

Today, stroke and/or hypertensive disease are among the top five causes of death in nine out of fourteen PICTs. Cardiovascular disease is reaching epidemic proportions in the majority of PICTs and are a leading cause of mortality in most countries of the Pacific (WHO 2002a; WHO 2003b; WHO 2003d). The incidence rates of cancer are lower in PICTs than the rates of industrialised countries but it is still a significant health concern. Cervical cancer is the most common cancer among females in the Pacific Islands, accounting for 20% to 30% of all cancers, while many men suffer from lung cancer. Prostate cancer is the most common cancer in American Samoa, Fiji and Palau and rates are increasing in many other PICTs (Coyne 2000). In sum, diabetes, heart disease, stroke and certain cancers account for six out of ten deaths in the Western Pacific region (WHO 2002b).

The global scenario

Globally, the major NCDs (cardiovascular diseases, cancer, diabetes and chronic respiratory diseases) combine to cause 60% of all deaths and 43% of the global disease burden. These percentages are expected to increase to 73% and 60% respectively by 2020, unless these NCDs are tackled. Unhealthy diet, alcohol abuse, tobacco use and physical inactivity are the major risk factors, and of these, physical inactivity is estimated to cause 1.9 million deaths annually and indirectly influences mortality from high blood pressure, high cholesterol and obesity (UN 2003).

In the USA, nearly one in four people lives with some form of cardiovascular disease (Nieman 1998). Moreover, as many as 250,000 lives are lost each year due to a sedentary lifestyle—more than those killed in automobile accidents annually (50,000), those dying from AIDS and STIs (30,000), and those lost in the entire Vietnam War (58,000) put together. Physical inactivity costs the USA an annual medical bill approaching USD 5.7 billion (Sharkey 1997).

In Hong Kong, the prevalence rate of coronary heart disease has increased considerably: from 39% in 1972, to 55% in 1982 and to 59% in 1992 (Fu 2001). Nishtar (2004) wrote that, in Pakistan, NCDs are in the top ten causes of mortality and morbidity, thus imposing a heavy economic burden on individuals, society and the health system. Nishtar states that one in three adults over 45 years suffers from high blood pressure, the prevalence of diabetes is 10%, and Karachi records one of the highest incidences of breast cancer for any Asian population. In Tanzania, prevalence rates of diabetes and hypertension are 5% and 8% respectively, while in South Africa the rates are 20% and 33%. Cameroon has the highest levels of hypertension in the developing world (Unwin 2001).

These countries and regions are included to explain that chronic diseases are a global problem. They do not select whether a country is industrialised or developing; they cross continents, religion, race, and cultures. As western lifestyle and diet become globalised, these deadly NCDs become globalised as well (Coyne 2000). WHO (2007a) projected that by 2030 NCDs will account for almost 70% of all deaths, with heart disease and stroke estimated to feature in the top four leading causes of deaths globally.

Social and economic costs, losses

Poorer regions such as Africa and South-East Asia make up 37% of the world's population but carry more than half of the global disease burden, yet they spend only about 2% of global health resources. On the other hand, there is the 20/90 syndrome where the 30 countries in the Organisation for Economic Co-operation and Development (OECD) comprise less than 20% of the world's population but spend 90% of the world's resources on health (WHO 2007a). This shows a huge disparity on health spending between the rich and poor countries.

In 2005, 35 million of the 58 million worldwide deaths were a result of NCDs. Of these, 80% were from low and middle income countries and affected the most productive age group of the population (Abegunde & Stanciole 2006; WHO 2002b; WHO 2000). When the most productive age group is affected, productivity is jeopardised as well. In PICTs, which are low to middle income countries and have some of the highest and most disturbing statistics on NCDs, the social and economic sustainability of the region is of grave concern. Abegunde and Stanciole (2006) stress that in low and middle income countries, limited resources and the double burden of infectious and lifestyle diseases are challenges. In Solomon Islands, for example, the limited supportive resources and environment for NCD prevention and control (SIBC 2007a), accompanied by the continued prevalence of malaria, the notion of a 'double burden' is ominous. If NCDs are not checked in Solomon Islands, they could have adverse effects on the health services and become very costly (Marau 2007b; SIBC 2007b).

When chronic diseases ravage society, and if a significant 'double burden' occurs, PICTs will be deprived of their health and productive potential. With early deaths, the quality and quantity of the workforce dilutes, resulting in lowered economic productivity. Health positively influences economic well-being, growth and wealth. Evidence from Eastern Europe and Asia indicates that economic growth of between 0.3% and 0.4% is associated with a 10% increase in life expectancy, related to reductions of cardiovascular diseases. In an empirical research of losses from stroke, heart disease and diabetes in Russia, Pakistan, China and India, the results indicate substantial labour supply gains with averted NCD deaths. This translates to accumulated gain in income of over 36 billion dollars in China, USD15 billion in India and 20 billion in Russia over the next ten years (Abegunde & Stanciole 2006). Similarly, PICTs could gain economically if serious and sustained effort is put into reducing mortality from NCDs. Evidence from Tonga shows that leg amputation can be reduced by as much as 50% in six years with the control of chronic diseases, and thus gain potential savings on medical costs (WHO 2003b).

Okinawa in Japan is home to the highest proportion of centenarians (those aged 100 or older) in the world: 39.5 for every 100,000 people, compared to about 10 in 100,000 USA citizens. Investigation into the Okinawa way of life shows that most people consume a good quality diet, consisting mainly of home-grown vegetables, tofu and seaweed, and also that they tend to live low stress, active lives (Bell-Wilson 2004; WHO 2002c).

The consequences of chronic diseases on individual household income, savings and quality of life invariably affect families and communities (Abegunde & Stanciole 2006). In PICTs as everywhere, they are threats to well-being, longevity and economic prosperity. Some Pacific Island countries spend up to 60% of their health budget on overseas referrals for patients, many of whom have NCDs, particularly diabetes (SPC 2002; WHO 2003b). The costs to society economically and socially are enormous and threaten the social fabric of Pacific societies.

What is the Pacific Islands region doing about NCDs?

In 1995, Health Ministers of Pacific Island countries met at Yanuca Island, Fiji, to formulate the 'Healthy Islands' theme, an ecological model of health promotion. Healthy Islands should be places where:

- children are nurtured in body and mind
- environments invite learning and leisure
- people work and age with dignity
- ecological balance is a source of pride
- the ocean which sustains us is protected. (Galea, Powis & Tamlin 2000; WHO 2005).

The Ministers for Health met again in 1997 at Rarotonga, Cook Islands, to follow-up on the Healthy Islands approach. At this meeting, the Healthy Islands concept was defined and core elements identified; they included: NCD prevention and control; nutrition, food safety and food security; and lifestyle and quality of life issues (WHO 1997). The Health Ministers met again in Palau in 1999 where the progress of the Healthy Islands idea was reviewed, and this was followed up in Madang, Papua New Guinea, in 2001. Ways to strengthen collaboration on various health issues, including NCDs (diabetes in particular) were discussed at that meeting (WHO 2007b).

In 2003, the Health Ministers met in Tonga and focussed on the importance of providing enabling environments for dealing with health issues and, at the Samoa meeting in 2005, it was noted that PICTs face a 'double burden', combating NCDs as well as communicable diseases such as HIV/AIDS and dengue. It was recommended that national NCD intervention plans carry both diet and physical activity components to them. Furthermore, it was recommended that there be regional networking to share experiences in NCD prevention and control, and push for legal and fiscal measures that would promote healthy diet and physical activity (WHO 2005; WHO 2003c). The Vanuatu meeting of Health Ministers in 2007 built on the Samoa commitment of providing supportive and enabling environments and structures for the Healthy Islands vision. It was encouraging to note improvements in the budgets of many Pacific countries dedicated to tackling NCDs. A multisectoral approach to NCDs was also found to be the most cost-effective. However, governments are not sufficiently controlling the flow of unhealthy food into their countries (WHO 2007b; WHO 2003c).

A pre-requisite in curbing the rising tide of NCDs in the Pacific is strong and committed political leadership. Low priority given to NCD national health plans is a concern (WHO 2000). Emphasised at the 1997 Ministers' meeting in Rarotonga was the importance of increased political support for the Healthy Islands process, reflected via national policies, appropriate legislation, allocation of resources, sustained programs that work in the local cultural context, and a sustainable financing mechanism (WHO 1997; WHO 2002c; WHO 2003b). National governments can play a major role in fighting NCDs if they actively intervene in the diet and nutritional behaviour of their populations. Finland and Japan are examples of countries that have vigorously intervened, shown in reduced risk factors and lowering rates of chronic diseases (WHO 2003d).

It cannot be done alone

A clear national policy for the prevention and treatment of chronic diseases is imperative (Abegunde & Stanciole 2006). Most PICTs have national policies and action plans but only a few have a secure source of funding to finance their plans (WHO 2005). They should view spending on chronic disease prevention as societal investment rather than cost to the government (WHO 2003c).

The traditional single sector approach in dealing with NCDs will be neither efficient nor sufficient. A multi-sectoral approach involving government agencies, civil society, the private sector and other partners is essential. It can include entities such as agriculture, education, housing, town planning, sports, transport, grocery organisations, school canteens and fast food outlets (WHO 2002c; WHO 2003b; WHO 2003d). Rayasidamu

(2007) urged Pacific Island health personnel to move away from the turf-conscious perspective to partnerships. He emphasised that Pacific Health Ministries do not own NCD problems and must work across agencies in society to tackle them, simply because they cannot do it alone. WHO (2002a; 2003c) also stressed the value of engaging the four Ps—politicians, professionals, the press and the public.

This multi-dimensionality demands lobbying physical activity and food issues for inclusion in the development and health agenda of the country. When this occurs, guidance must ensure actions relevant for NCD prevention and promotion are scientifically valid, culturally appropriate and resource-sensitive. Continuing research into PICTs' NCDs and health systems needs to be better coordinated to enable the development, monitoring and evaluation of national and global policies and programmes (Nishtar 2004; WHO 2006; WHO 2003d). In all these, the spirituality, community cohesion and identity of the people must be meaningfully considered (McLennan & Khavarpour 2004; Nishtar 2004).

PICTs need to continually re-visit their health promotion policies. The fact is that, although these chronic diseases are not transmitted by an infectious agent, the behaviours that predispose people to these diseases can be transmitted via advertising, product marketing and social interactions (Huynen, Martens & Hilderink 2005; WHO 2003c). Thus, sustained, creative and relevant communication strategies are required to penetrate the primary settings such as the home, pre-schools, schools and workplaces (WHO 2003d). Governments can also work on better public transport networks to reduce dependency on cars and providing safe areas for physical activity, including cycling and walking (WHO 2002b; WHO 2003c). In addition, on an organisational level, such as in government ministries, workplace physical activity promotion can help improve employees' lifestyle habits and morale, as well as the organisation's public image (McMahon, Kelleher, Helly, & Duffy 2002). The task is multi-dimensional and requires governments and particularly health ministries to marshal the strengths and advantages of agencies in society to prevent and control chronic diseases. It cannot be done alone.

Food strategies

An important strategy to help reduce the growing chronic disease prevalence is to bring about changes to the food supply. Changes to the food supply require reducing the amount of fatty food coming onto the market, and replacing it with food that has more fibre, carbohydrates and micronutrients (WHO 2003a). The traditional diet of PICTs of root crops, leafy vegetables, fish and fruits adequately supplied the nutritional needs of islanders for centuries and there is merit to allowing this to dominate dietary patterns. A study of a group of indigenous Hawai'ians who reverted to their indigenous foods showed a reduction in obesity in some populations (WHO 2003a). In addition, social and economic barriers need to be removed because circumstances are such that Pacific Islanders may want traditional food but cannot afford it; imported, processed food is often cheaper. According to WHO (2006), access to safe and nutritious food is a human right.

Food planning should aim to increase the consumption of local food by directing food preferences, food choices and food marketing towards local foods. Most PICTs are heavily food dependent (WHO 2003a), relying on overseas imports for their food supply. In Solomon Islands, for example, SBD110 million is spent yearly on imports of rice, flour, corn and other goods and there are calls to reduce this dependence on other nations for the country's food security. Food dependency is further exacerbated when export-based development ignores the potential for marketing indigenous foods (WHO 2003a), because indigenous foods can be packaged creatively for export. Ivi in Fijian or Tahitian nuts and breadfruits, for example, can be packaged creatively for local and export markets.

With increasing child diabetes in Solomon Islands, parents have been strongly urged to provide their children with a healthy diet, preferably eating from traditional food sources (Marau 2007b). WHO (2003c) encourages Asia-Pacific countries to retain many features of their traditional diets rather than including a lot of western foodstuff. Imports that are healthy in content need not necessarily be banned; logos could be put on food products that meet national Pacific nutrition foundations. In New Zealand, for example, a nutrition logo is put on products meeting the salt content standards of the National Heart Foundation (WHO 2002a). Furthermore, taxes on foods of poor nutritional value, such as carbonated soft drinks and high-fat food should be imposed (WHO 2003c).

Education for sustainability

Education for sustainability should not focus solely on environmental issues. Educators need to engage in pedagogical discussion with students, developing their capacity to interpret what it might include (Alvarez & Rogers 2006). It needs to be infused into the curriculum, taking into account the social sustainability of PICTs. There is enough overt evidence to show that physical inactivity and poor diet, among other risk factors not discussed in this paper, have put the health of Pacific Islanders at great risk, requiring the deliberate infusion into the school curriculum of physical activity and nutrition education.

The following are recommended for increasing school children's physical activity and improving their nutrition:

- The importance of the parental role in facilitating children's activity should be given more attention in public health promotion. Parental support and role-modeling are associated with children's higher physical activity levels (Jones-Palm & Palm 2004; Lofshult 2004; Mathias, Brynteson, Adams & Caldwell 1997).
- Physical activity and inclusive organised sports should be given more attention in physical education classes, and the health-related components of fitness should be developed. Sessions should be organised in ways that allow maximum movement and participation (Everhart & Everhart 1998; Jones-Palm & Palm 2004; Vas-siliki, Nikos & Christina 2004).
- Space and facilities for physical activity, games and sports at the village, community, and city level should be a priority to cater for students' physical activity outside of school (Jones-Palm & Palm 2004).
- Games and play festivals for the family should be developed for communities and cities. Recent interventions have incorporated community-based strategies in addition to school-based approaches, usually targeting specific populations. Networks of activity-oriented projects for children and youth, involving kindergartens, schools, clubs, religious organisations, recreation centres, and so forth can be established (Jones-Palm & Palm 2004; Przeweda & Dobosz 2003; Salmon, Ball, Crawford et al. 2005; Wen, Thomas, Jones et al. 2002).
- Schools should have a School Physical Activity Policy that provides useful guidelines for maximising physical activity programs and opportunities within safe, supportive and fun environments. An inclusive and effective physical activity policy should consider all aspects of school such as playgrounds, classroom curricula, special events, intramural activities, sporting events, fun days, student leadership programs and physical education classes (Preece 2005). An example (Preece, 2005) is given below:

A healthy school environment is important for growth, development and learning.

We believe that this school has a responsibility to foster and support healthy practices by:

- providing quality daily physical education classes for 30 minutes a day for every child in the school
- ensuring that physical activity is not used as punishment or withdrawn as a result of non-compliance in another subject.
- providing a variety of opportunities that allow students to explore new activities that they may adopt as a lifelong behaviour
- ensuring that all children have the opportunity to participate in the school intramural program
- rewarding participation, not winning
- forming partnerships with outside agencies in order to introduce children to physical activity opportunities in the community
- ensuring that all students are provided with an opportunity to become part of a recreation club or student leadership group that focuses on active living
- ensuring that students are provided with safe playgrounds and opportunities to be active during recess
- ensuring that children have access to before/after school recreational programs that offer physical activity in a welcoming environment
- enforcing the "get active" theme that ensures that all students go out at recess and participate in sporadic physical activity events.

- School head teachers and principals must be instrumental in implementing canteen policies, so that only healthy foods are sold at school canteens. The Fiji National Food and Nutrition Centre, for example, created a canteen guideline for use in Fiji schools. The fact is that the obesity level of children in Fiji doubled from 4.5% in 1993 to about 13% in 2004 (Fiji Times, 2006). Teaching good nutrition in class makes little sense, unless we provide children with enabling environments to exercise and formulate appropriate dietary patterns.

Personal action: Have you taken your 30-minute walk today?

I read this question on the back of a person's T-shirt and on billboards in Fiji: Have you taken your 30-minute walk today? The question tells us that the amount of physical activity one needs does not have to be excessively cumbersome to gain positive benefits. A brisk walk, a canoe paddle, a swim, a bicycle ride, a bush walk, or a recreational sport can all do one good. Furthermore, an 'active transport' mode, such as walking to and from work, can be an option for many (Wen, Rissel & Bindon 2003). The standard recommendation is to engage in moderate to high-intensity physical activity at least three times a week (Ronda, Assema and Brug 2001).

A former Fiji Health Minister, Hon. Solomone Naivalu, likened the campaign against NCD to a combat. The enemy to be slain is NCD, Fiji's number one killer: 80% of deaths in Fiji are due to lifestyle diseases and 70% of these are from heart disease (Naivalu 2004). Naivalu also suggested measures that could go a long way towards improving the health of the individual, such as taking the stairs instead of the lift, walking to another office instead of sending an email and taking a 30-minute walk in the morning and afternoon. As Nand (2004) says, we have lots of beaches in the Pacific Islands so let us put footprints on them. There will be no footprints on the sand if we sit in our offices or watch TV.

Recommendations

Regional networking to share experiences in NCD prevention and control should continually be encouraged.

- Pacific Island Governments need to view spending on NCD prevention as an investment. There are social and economic benefits if this is realised. A prerequisite to curbing the rise of NCDs is strong and committed leadership. National NCD health plans should be given high priority. It should also be realised that there are significant 'double burdens' in many PICTs.
- National NCD plans must carry both diet and physical activity components to them, as these are inter-related.
- A multi-sectoral approach to NCD is the most cost-effective method. The traditional single sector, turf-conscious approach will not be effective. This means involving a host of other entities such as agriculture, education, town planning, sports, transport, grocery organisations, school canteens and so forth.
- There needs to be a combined push for legal and fiscal measures that would promote healthy diet and physical activity. These include a clear national policy for the prevention and treatment of NCDs, appropriate legislation, allocation of resources, sustained programs that work in the context, and a sustainable financing mechanism.
- Pacific governments need to control the flow of unhealthy food into their countries.
- Research into PICTs' NCD activities needs to be coordinated to enable the development, monitoring and evaluation of national and global policies and programs.
- Levels and locations (including schools) of interventions in physical activity and nutrition should be structured and on-going. The aim is to develop personal exercise and healthy behaviour among populations.
- Food planning in PICTs should aim to increase the consumption of local food by directing food preferences, food choices and marketing towards local foods.
- Schools can and should be supported to provide enabling environments for regular physical activity and healthy eating. Increased status for physical education and canteens selling healthy foods are two recommendations to help provide such an enabling environment.

Conclusion

Most people today move less than their grandparents did. We are moving away from eating properly. We are going for convenience rather than value. As a result, PICTs are faced with enormous NCD-related issues. Diabetes, stroke, heart diseases, hypertension and various types of cancer are killing Pacific people at alarming rates. Heart diseases are major causes of death in many PICTs. Diabetes rates in many PICTs are higher than western

countries and many other regions. Nauru has the highest diabetes rate ever recorded, but between 1923 and 1966 only one case was recorded. The contrast and enormity of change need not be exemplified any further.

This paper has emphasised that obesity, physical inactivity, and poor diet, have contributed to these rates. Of the top ten most obese countries, eight of them are PICTs. Preference of traditional food sources of taro, yams, tapioca, fish, leafy vegetables, and fruits that are lower in fat, sugar, and high in fibre, has been interrupted by various imported foods that are high in fat, sugar, salt and low in fibre. I suggest that because it's a conclusion a few things could probably be re-iterated at this stage to push points strongly to end the chapter. I suggest leaving it as it is.

The social sustainability of the region is at stake, and focussed action needs to be taken by governments. A multi-sectoral intervention will be the most effective; it has to be vigorous and sustained and it should include schools. Finally, although these chronic diseases are common and costly, they are also very preventable. Pacific Islanders need to make correct choices and pass on to future generations something better.

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Discussion

- In 1875 Europeans brought much disease to Fiji and up to 1945, there was concern that Fijians would become extinct in 50 years because of the ever-declining population due to exposure to diseases and the guns Europeans used. When the population increased slightly in the 1950s they were introduced to birth control. I think that is unfair to the Fijian people. Fijian women were given tablets that they didn't understand, these caused different diseases amongst women. Has there been a study on the after effects of what they gave women?
- Concern has shifted from infectious diseases to non-communicable diseases that cause problems that are hard to control. There are large social sustainability issues in the Pacific Islands and statistics are alarming, especially for the small islands. There is a need to look at what causing this disease problem and what we can do to change it.
- It is interesting to note that the deficiency of iron has become a problem amongst Fijian women over the past 20 years. What does the SPC have on the history of how this occurred and what agencies are doing to address the problem.
- In the past the Fiji National Nutrition Council tried to promote healthy diet but this hasn't been the success it should be. This effort has to be continued and the environment examined also. Supplementations have been given, for instance iron tablets to pregnant women when they went to the maternity clinic for their first booking. It seems the rate of anaemia in pregnant women at first booking has come down a little but still a need to determine if it is the result of supplementation. Micronutrient supplementation was started just last month in Fiji and includes addressing anaemia throughout the population. Children are in the process of being dewormed, then women and everyone else will be treated, a huge project. There was also supplementation of cereal, for instance in 2005 the flour was fortified. The Fiji Government is going to try and survey the effectiveness of that policy, and then see if it is to be continued. A lot of Fiji people are not eating many vegetables now and a survey seems to indicate they are only eating one or two vegetables per day. It seems local vegetables are not as interesting or attractive as imported ones.
- There was a question about how many countries in the region have dietary guidelines? Australia has guidelines and supermarkets put them up on the wall, but the questioner did not know how effective this is. Are people likely to pick up knowledge of which micro nutrients are in what fruit and vegetables? Is there information on this in the Pacific?
- The Pacific has guidelines, for instance those publicised by the national heart foundations, but they could have more.
- The SPC did develop dietary guidelines and the plan was for each country to modify the information and make it more relevant for their own situation. Some countries had but I don't know what point it is at now or how they are promoted. Fiji has adopted dietary guidelines and is developing more support materials before promoting them.

Plenary 6

STIs, HIV and AIDS, and youth in the Pacific

Nii-K Plange

Keynote address

**Issues and strategies for prevention of adolescent
sexually transmitted infections in the Pacific**

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Discussion

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Issues and strategies for prevention of adolescent sexually transmitted infections in the Pacific

Nii-K Plange

Unprotected sex among adolescents—leading to sexually transmitted infections (STIs) including HIV, unwanted pregnancies and other sexual and reproductive health problems—remains a global challenge of immense proportions, from which South Pacific countries are not spared. Although efforts at both policy and programmatic levels have faced up to the challenge, the battle has not subsided. All indicators of a growing and persistent problem of unsafe sex among youth aged 15–24 years continue to increase. The HIV epidemic has, over the intervening years, given added urgency to efforts at prevention of STIs including HIV and at addressing adolescent sexual and reproductive health problems, initiated and encouraged by the ICPD 1994^a initiatives. To recall, the Cairo Consensus included: reduction of poverty and inequality, providing universal access to family planning, ensuring safe pregnancy and childbirth, empowering women and constructively engaging men, keeping children, especially girls, in school longer, investing in young people, protecting the environment, demonstrating political leadership and upholding financial commitments. Increasing infection rates of STIs among youth have made the consensus efforts at meeting the challenges more complicated, urgent and difficult. They have also confounded our strategies of prevention and remind us of the difficulties in achieving behaviour change, especially in behaviours related to sexual desire and pleasure.

HIV prevention efforts have clearly shown up the linkages between the structure of society and the vulnerable conditions that prevail for young people and the risks they are indirectly driven to take (Joint United Nations Programme on AIDS, 2008: 65). At the same time our efforts have laid bare the changes in values and belief systems that are needed if success is to be attained. If HIV is now the most serious form of sexually transmitted infection, its prevention is also, simultaneously, a metaphor for social change.

Adolescence and sexual behaviour risks

Adolescence has always been celebrated as a period of biological and psychological transition to adulthood. Sociologically and biologically the transition is also intertwined with the search for, and establishment of, self-identity. This transition is recognised as accompanying burgeoning sexual desire and energy, curiosity, risk-taking and experimenting. In short, the period is also prone to behaviour problems and while cultural definitions and markers of adolescence differ, the critical issues of sexual début, sexual experience and reproductive health remain among parents' central concerns about this transition. Taking hold in young people without a sustained sense of responsibility and direction—acquired through appropriate information and counselling on sex and sexuality, drugs and alcohol use and abuse—the problems fester. Often the problems are those of reproductive tract infections transmitted by sexual activity,^b unintended and unwanted pregnancies, and abortion. These also have later and inevitable detrimental consequences. The sex differences and gender relations predispose female adolescents, compared to their male counterparts, to disproportionate health and social concerns. Girls aged 15–19 years, for example, are more likely to die in childbirth than women in their twenties and girls younger than 15 years are five times as likely to die of pregnancy related causes as those in their twenties (UNFPA 2009:8). The urgency of counteracting this situation is underlined by the call to strengthen health systems, intensify HIV prevention through universal accessibility of services and to ‘. . . protect the rights of girls . . .’ (ibid.).

The global situation

Across the world, just about 15 million young females aged 15–19 give birth each year, accounting for more than 10% of all babies born worldwide (UNFPA 2002:4). In the least developed countries population figures show that one in every six births is to young women aged 15–19 (ibid.). Only about 17% of these young women use any available contraceptives including condoms. On a daily basis, 500,000 young people between ages 15 and 24 are infected with an STI. The worrying global figures for HIV infection for young people are of great concern: almost half of this HIV infection is within the ranks of those under age 25 and the current epidemiology of STI and HIV combined suggests that these are diseases of young people (WHO 2004). This, undoubtedly, presents an enormous reproductive health challenge, intensified by the sheer magnitude of the numbers: more than half the population in developing countries is under 25. The 10–24 year age group in these countries is estimated at 1.3 billion and growing; by 2025, this number is expected to rise by some 400 million (‘Adolescent reproductive health’ 1996; UNFPA 2004).

The sex and gender aspects of these figures are clear though not always implicated. In many countries over 30% of girls do marry, or are actually given into marriage, before 18 and teen birth rates are increasing even if slowly. Young mothers, especially those under 16, have increased likelihood of serious health risks and teenagers are over-represented among those obtaining abortion and needing medical care for complications of unsafe abortion. Higher levels of morbidity and mortality also occur among the offspring of adolescent females, mainly because low birth weights pose higher risks (UNFPA 2004). For young men syphilis can affect later reproductive health, and for both young men and women early parenthood does have social and economic consequences, for example driving them to leave school early for work, without skills and therefore for only minimum wages if lucky enough to find any. HIV is now treatable but until further notice of discovery, distribution and accessibility, it is a lifetime of medication.

The Pacific situation: population issues

The Pacific Region presents a remarkable diversity across a range of demographics, population estimates, STI infection rates and teenage fertility rates. Most important of all is the prevalence of HIV in the region. Papua New Guinea has the highest HIV prevalence of about 1.6%. Over the past decade, the population of the Pacific Island Countries (PICs) has been growing steadily at around 2.2% each year. Growth is highest in the Micronesian countries, averaging 2.7% per year, and lowest in the Polynesian countries, averaging 1.3% per year. The population is young, almost 50% falling below 25 years. Papua New Guinea, for example, has 41% of its population under 15 years and a further 20% between 15 and 24 years. The school-age population of many PICs has also been estimated to grow (Table 1) so adolescent issues will, it seems, remain of paramount importance.

The overall population growth and its youthfulness can, nevertheless, be seen as an asset for labour force and human resource development and economic growth. The sustainability of a young, vibrant and much needed labour force for national development, though, depends on its ability to avoid health risks, especially those associated with sexual and reproductive health including HIV and AIDS. Looking forward to population ageing highlights the value to national development of having a healthy ageing population that at ages of 60 and beyond will make as few demands as possible on the health services.

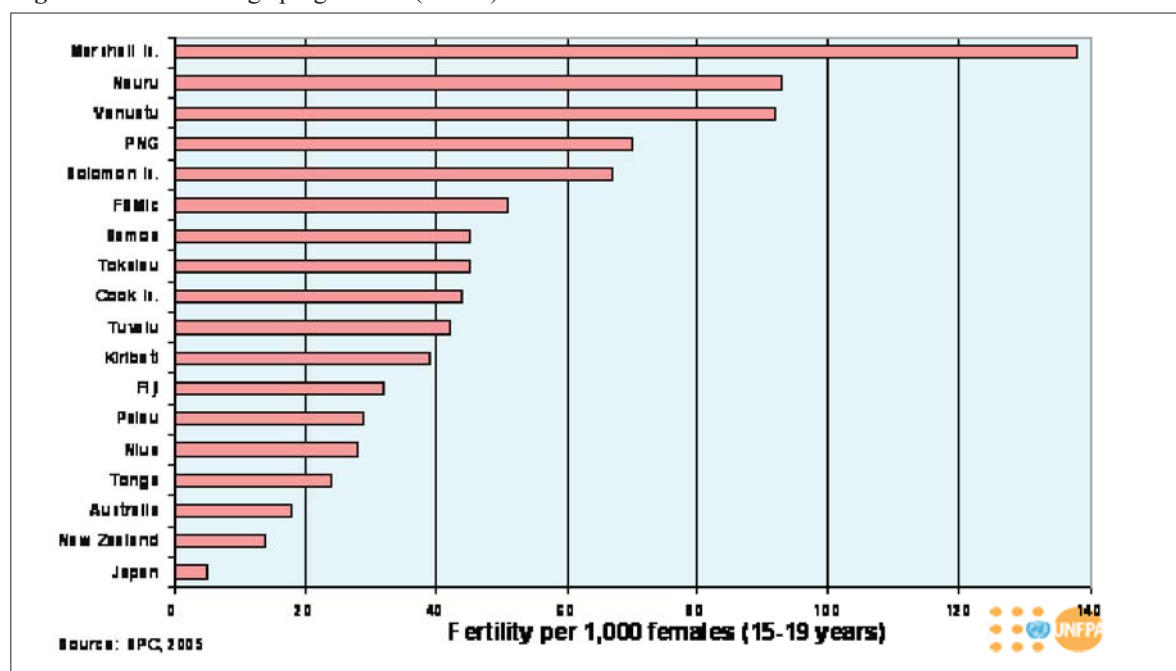
Table 1 Projections of school-age population, selected Pacific countries, 1990–2010

Country	School-age population		% change
	1990	2010	
Fiji	213,320	219,460	+2.9
Kiribati	23,700	28,590	+20.6
Solomon Islands	101,170	173,540	+71.5
Tonga	30,880	23,910	-22.57
Vanuatu	44,930	91,830	+104.4
(Western) Samoa	62,800	67,300	+7.17

Source: Cole (ed.), 1993:16.

Adolescent reproductive health and HIV in the Pacific: issues and challenges

While early marriages appear to be in decline in the PICs, teenage pregnancies remain high in some of the countries. Teenage fertility rates in PICs range from 3% to 20% or more for mothers below 19, and from 22 in Tonga to 151% in the Marshall Islands. In Vanuatu and Solomon Islands, the rates are 12% and 9% respectively of women aged 16–19. These high rates are good indicators of both an increase in youthful sexual activity and low contraceptive, including condom, knowledge and use (Figure 1).

Figure 1 Pacific teenage pregnancies (~2004)

The high incidence of teenage pregnancy is also an indicator of some underlying cultural practices, with implications about gender relations, power and search for identity. In some countries, there are undoubtedly pressures on girls, especially, to marry and have children early or to yield to sexual demands from young men (sometimes their lovers) and, within households or communities, older men. Reports of sexual defilement and abuse of young girls and young girls in sex work are some evidence of this. Other social practices, such as the *konvoi* in Fiji and *lainap* in Papua New Guinea, and rape of teenage girls, are instances of the nexus between masculinity and power. Their implications for female adolescent pregnancies outside of marriage and sexually transmitted infections cannot be overlooked. Of major concern is the fact that all this continues to occur in the context of the strident efforts in the implementation of the ICPD recommendations.

The ICPD + 10 progress report (UNFPA 2004) shows efforts by PICs to tackle adolescent sexual and reproductive health issues through policy, education, the creation of an enabling environment and the pervasive use of gatekeepers. Such efforts include the establishment of National Commissions of Youth in the Marshall Islands, the ratification of UN Conventions by Palau and the Cook Islands, the provision of national health programs, including adolescent reproductive health (ARH) in the Cook Islands, the development and implementation of various policies on youth in Fiji, Papua New Guinea, Tonga, Solomon Islands and Samoa, and the institution of information, education and communication (IEC) advocacy campaigns. UNFPA and the Secretariat of the Pacific Community (SPC) have also sponsored regional ARH projects promoting the rights of adolescents through in-school and out-of-school programs. Gatekeepers such as churches, community leaders, parents, teachers and young people themselves have been included in the different strategies.

The available data, however, indicate that more is yet to be done. The ICPD + 10 progress report states that 'many Pacific Island leaders have expressed concern on the high levels of teen pregnancies, sexually transmitted infections, and high risk behaviour during the era of rising HIV infections' (UNFPA 2004:1). These concerns are borne out by the evidence available, as shown in Figures 2–6. Gonorrhoea, chlamydia and syphilis have all been on the rise and the epidemiological dangers of increasing STI infection for the spread of HIV are well documented. Put simply, an increasing incidence in any sexually transmitted infection is a daunting harbinger of potential HIV infection. To date, HIV infection rates in many of the PICs are low but a slow increase is also apparent (Figure 4) and its steady increase in Papua New Guinea, against the background of increasing STIs among the youth, is a reminder of the lurking danger. The warning signals remain, especially when the known and potent risks of HIV transmission—multiple concurrent sexual partnerships, low condom use, commercial sex and men who have sex with men—are all present in the PICs (WHO 2006).

A recent study of ninth graders (i.e. school students about 14 years old) in one Pacific country found that 37% of the boys and 17% of the girls reported having experienced sexual intercourse with several partners. In a recent second generation surveillance study, 45% of the sampled respondents aged between ages 11 and 24 in Vanuatu

reported having had sex with more that one partner in the previous year (WHO 2006:117). Corresponding percentages were Tonga 22.7%, Solomon Islands 21.9, Samoa 11.7%, Kiribati 36.8% and Fiji 67.5% (ibid.; also UNICEF & SPC 2005).

Figure 2 STIs in selected Pacific countries, 2005–2006

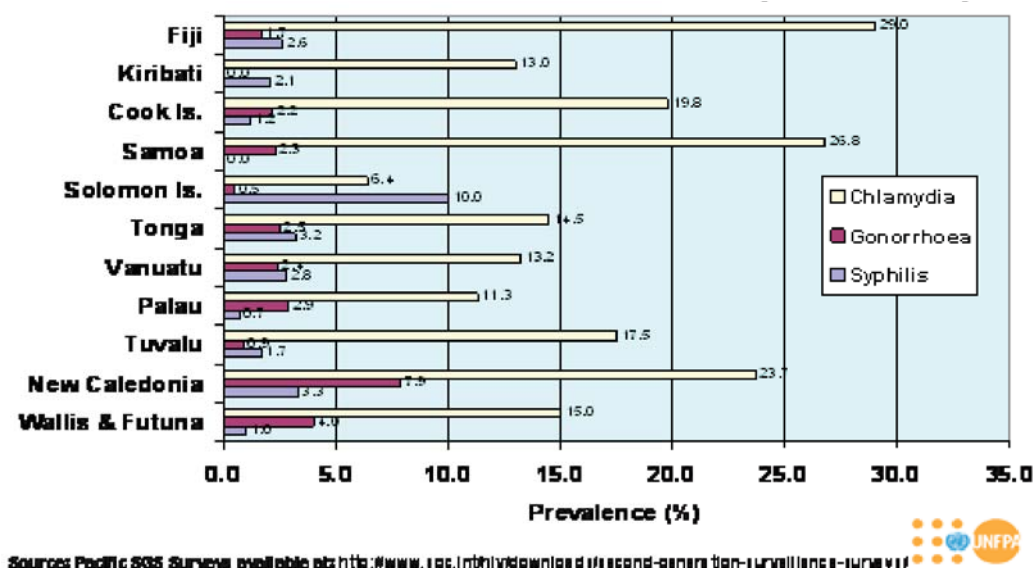
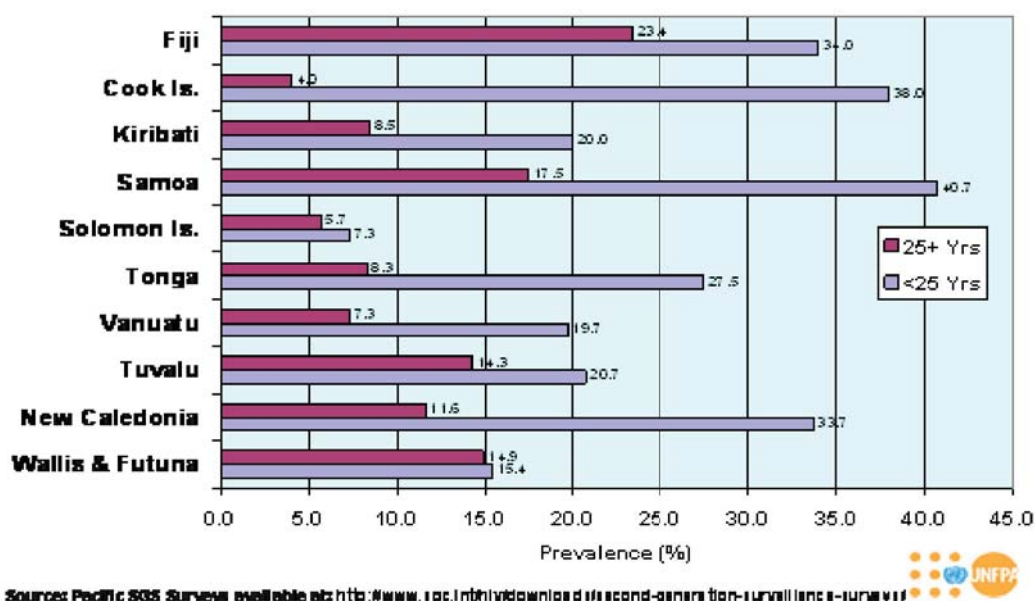


Figure 3 Chlamydia prevalence, selected PICs by age, 2005–2006



The evidence of high condom knowledge but low use among PIC youth is mounting. Since this coexists in the presence of the known social drivers of the HIV epidemic in the PICs—such as unemployment, gender-based violence, poverty and drug and alcohol use and abuse—the challenges to adolescent sexual health and HIV prevention remain daunting.

HIV and AIDS and Pacific youth

The Pacific islands cannot be insulated from the HIV pandemic. From earlier reported cases of HIV and AIDS (234 and 645 cases respectively as of mid-1995) most PICs are currently experiencing low prevalence but rising levels of infection (Figures 4 and 5). Papua New Guinea presents a special case with a generalised epidemic and a higher prevalence of about 1.6% (PNG 2008). To date about 16% of all reported HIV cases in PICs are in the age group 15–24. As the UNICEF study reports, ‘... in every country with 13 or more cases, at least one case was a youth ...’ (UNICEF & SPC 2005). The factors that compound the scare are the youthfulness of the

populations in the PICs; the evidence that sexual activity or experimentation is occurring earlier, among young people without relevant knowledge and information; and some of the cultural constraints to change inherent in the structure of PIC societies. The report further cautions that ‘... if HIV infection continues at the current rate, some smaller populations will face risks of possible extinction in the not so far off future ...’ More importantly, the underlying social and structural factors that make young women vulnerable to HIV infection, for example, inequality, sexual violence and stigma and discrimination, do have a strong influence on sexual and reproductive health rights for young women. These concerns underline the agreements of UN General Assembly Special Sessions and the recent universal access initiative and contributions from donors including the Global Fund to mount effective national responses.

Lessons learnt from over two decades of HIV prevention point to the urgent need for broad social change, which must involve change in attitudes and sexual behaviour and practice, stigma and discrimination of those infected with HIV, gender relations and importantly, cultural beliefs and structural factors that predispose individuals and categories of people, including especially Pacific youth, to the risk of infection.

Figure 4 Annual reported HIV cases in PICs (excluding Papua New Guinea), 1980–2008

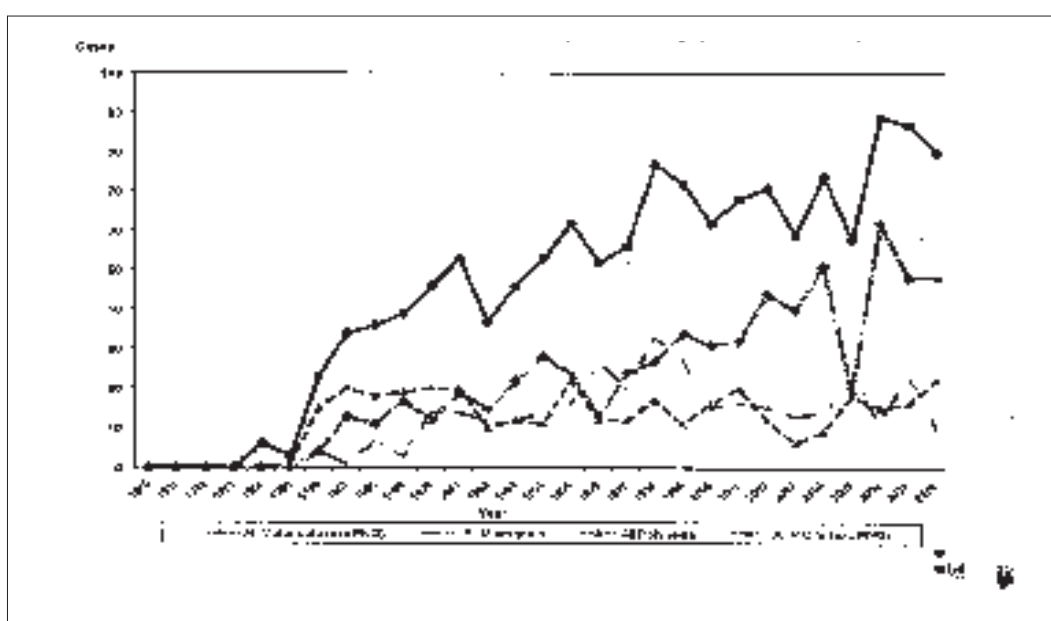


Figure 5

PICTs, Papua New Guinea, New Zealand, 1980–2008 HIV Cases: PICTs, PNG, Aus, NZ

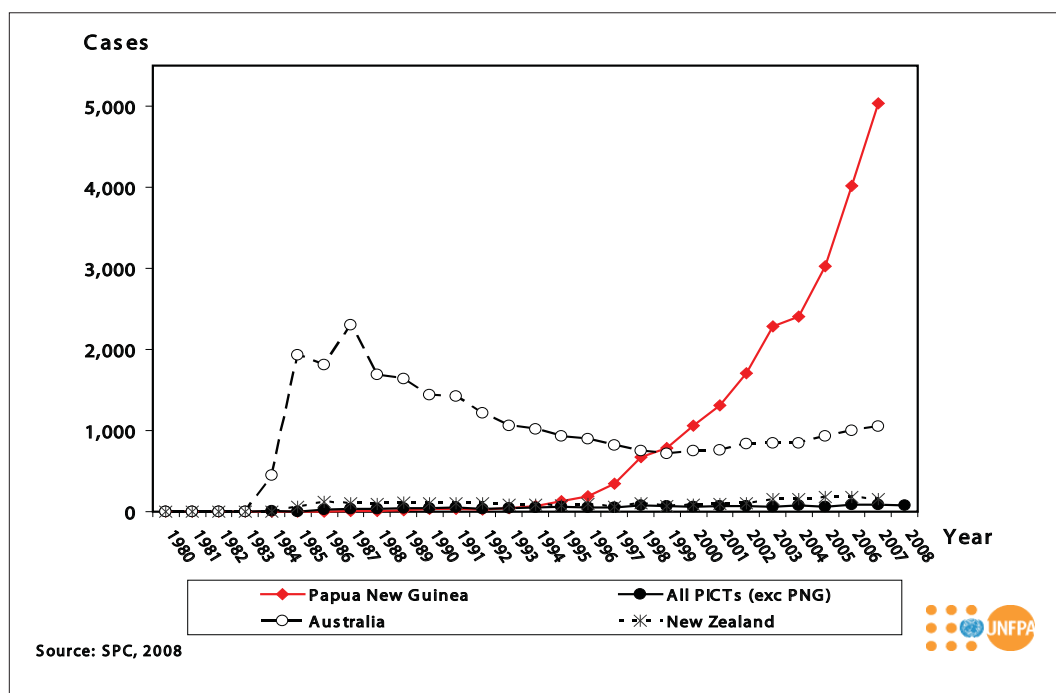
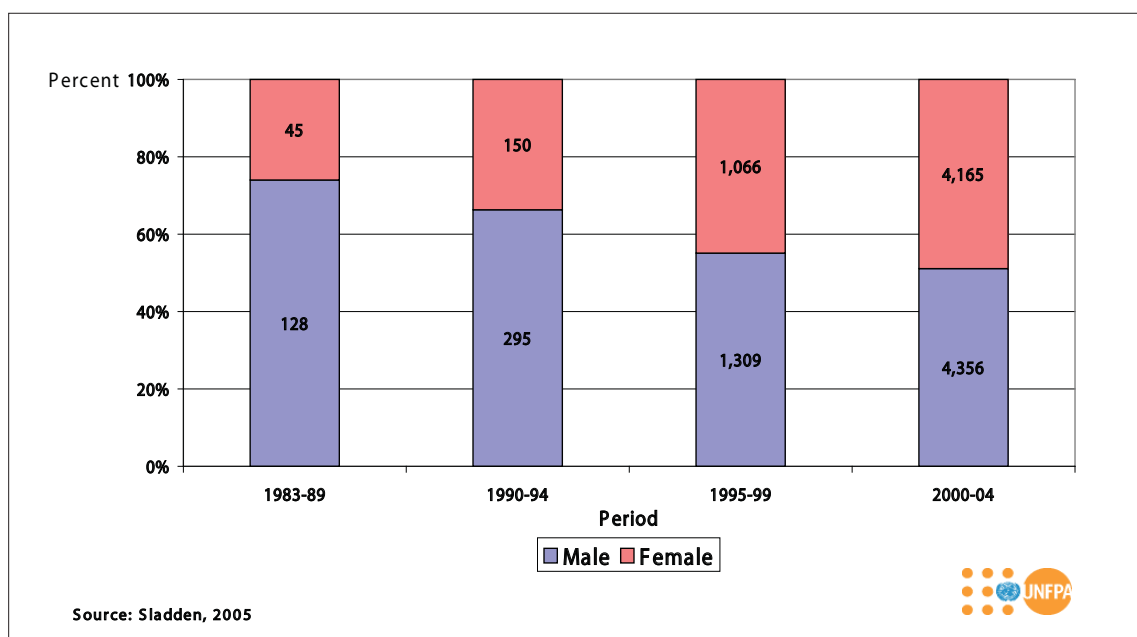


Figure 6 HIV cases: Ratio of male and female HIV cases, all PICTs, 1980s–2004

What are the challenges?

The prevailing crisis of increasing teenage pregnancy, STIs and HIV infections (and the feminisation of the latter; see Figure 6) cannot be explored without recognising the linkages with the structural changes and crises within the PICs. Almost a decade ago when I explored the youth situation in the PICs, I framed the question of youth STI and sexual health problems as mediated through some of the inherent problems associated with structural changes as the region undergoes both economic and cultural change. With the passage of time, I have become more aware of other structural issues of importance that relate specifically to contexts in some of the PICs and their potential impact on youth generally and HIV prevention specifically. I refer to the war in Bougainville and the civil strife in Solomon Islands.

With respect to these cases, I have always maintained, since the peace, that one cannot press youths to bear arms and fight a war—or even witness, experience and survive a war at the age of say, 11–17, with all the behaviour excesses of alcohol and drug use, violence and sexual abuse—and then after the war go back to reminding them that they are young people with problems. The important issues of lost time for education, loss of parent(s) and friends, loss of intimate relations, lack of guidance and unemployment that follow the peace cannot be lived without the feelings of despair, frustration and disenchantment. The consequences and their immediate impact on youth behaviour, especially alcohol and drug use as well as sexual behaviour and risks, are yet to be fully explored. But they also exacerbate the prevailing structural crisis and change, to challenge our intervention strategies.

Inherent in this crisis is the role of the changing environment of economy, education, religion, family and the potential impact of the media (previously film and television, but now the ubiquitous cell-phone and the internet and the exponential growth of the technologies that underlie them). For HIV, a decade ago still a new arrival in the socio-sexual and STI context, I expressed the fear of its reaching epidemic proportions if an effective response including changes in behaviour and needs of youth in areas such as education, employment and family relations was not mounted.

To date, these same categories have been identified as significant contexts of, and for, the response to the HIV epidemic if universal access to prevention, treatment, care and support services is to be attained. To use these categories effectively—I discuss five of them here—the challenges that they pose need to be understood, so that relevant interventions for change can be designed.

Economic change: unemployment and poverty

The economy and its changes over the years have not benefited the young males and females of the PICs with employment, nor has the public service the capacity to provide work opportunities. Outside the public sector, private investments in manufacturing, distribution and services remain small and no more able than the public

sector to provide openings for many of the youth. Evidence from PICs^c shows the large numbers of young people coming out of the school system who cannot be absorbed into the workforce (Youth in Solomon Islands, 2004; see also Plange 2001:29–34). An earlier study noted that in Fiji, for example, out of 10,000 school leavers seeking employment, only 1,500 can be employed; and in Kiribati, between 80 and 240 jobs would need to be created every year to absorb young school leavers. The increasing migration to urban areas as the rural economies fold, and the prevalent lack of skills and investments, worsens this situation. Urban and peri-urban unemployment figures in Suva, Apia, Tarawa, Honiara and Port Moresby attest to this. Where employment is possible, especially in the small-scale processing or garment industries, it provides limited jobs for young females. The overall economic situation and endemic unemployment and under-employment have created poverty-ridden households and numbers of idle youth, and in some PICs have led young boys and girls out of the school system onto the streets as school fees and other school related charges are difficult for their families to meet. For the large numbers of unemployed young people, the disciplines of time, planning and aspirations that employment brings are lost and replaced by idleness, anger and frustration (UNICEF & SPC 2005; Youth in Solomon Islands 2004).^d

While poverty and idleness are not by themselves causes of STI or HIV infection, they create conditions of vulnerability that are conducive to sexual risk-taking. Evidence from studies in Fiji, Solomon Islands, Samoa, Papua New Guinea and Vanuatu shows that sex for money is a practice for some young females under 19 years of age and that male youth do also engage in sex with commercial sex worker partners (Plange 2001). Given the evidence of low condom use, the consequences for STI and or HIV infection are clear. I am reminded of an exchange I watched on TV about a year ago. An adolescent female South African in an exchange with ex-President Clinton on youth sexual behaviour and the risk of HIV infection commented, ‘We do not have jobs or anything to do . . . stealing is a crime and we can be arrested but sex is not a crime so we do it’ (broadcast on CNN, 2005).

The family: crisis of change and adolescent sexuality

Families in the PICs have not been spared the impact of these changes and within the households and communities cultural change and attendant conflicts are played out between parents and adolescent children (UNICEF & SPC 2005). Meanwhile the family as a unit has itself been undergoing changes in the PICs. The extended family has given way to nuclear and single male and or female headed families, both-parents working families, adolescent families, and grandparent headed families of adolescents. Each of these produces its own problems of managing the value conflicts and challenges of new ideas, including those of parenting and its outcomes for young males and females.

As the immediate context for development, through socialisation, families have been striving to ensure that the youth have a fair passage to adulthood. But this has not been easy as cultural change and confusion of roles appear to challenge their efforts. Both parents and children struggle to manage the challenging and often conflicting demands of custom and modernity. For youth, this struggle is made worse by the absence, in many contemporary Pacific cultures, of specific roles for adolescents and the reluctance on the part of adults to recognise, respect, and give space and place to young people’s concerns, opinions and voices. Among other things, the *tabu* on being open about anything relating to the area of sex, sexuality and reproductive health creates a yawning gap in parent/family socialisation (Plange 2001; Latu 2002; see also UNFPA 2004). Increasingly there are reports that in many homes, sex is never a subject of discussion. ‘We are taught to sit quietly in adult company, without speaking,’ one youth commented. ‘If we attempt to express our opinions we are criticised and belittled and told to keep quiet because we do not know anything about life’ (UNICEF & SPC 2005:32). Many parents remain obdurately reluctant to talk about sexual issues and large numbers of parents and adult community members remain adamant that sexual education should not be taught in schools. The consequences of the silence are certainly not starvation for sexual knowledge; but perhaps the hunger is being fed the wrong ideas from other sources. Here too I am reminded of the comments from a student from one of the Suva schools I interviewed in early 2000: ‘We put on a sex video then when we hear the car coming home we take it off and put on a family movie . . . sex is not talked about . . . your father doesn’t tell you how to use a condom . . . they are embarrassed. Our age group in Fiji don’t usually practise safe sex’ (Plange 2001:55).

Yet what remains a *taboo* at home is simultaneously a *totem* in adolescent self-development, maturity and identity. Messages and information, then, are sought from elsewhere; usually friends, the TV and films (cinema, video or DVD), magazines and the internet. Armed with inaccurate, unrealistic or unreliable information but with

a desire for experimentation (and the whisperings of the pleasures of sex) adolescents indulge in unprotected sex, too often with painful consequences of either pregnancy, infection or these days, HIV.

Curiously enough, the same parents who are reluctant to provide information about sex and sexuality to their adolescent children are willing to marry them off to older men and older men within communities who remain adamantly against sex education as a taboo do, at times, sexually abuse young girls, who for fear of recrimination remain silent. But we cannot always blame parents. Indeed as a Youth representative stated in a symposium at the recent ICAAP in Bali, ‘... some of our parents have never seen, let alone used, condoms before. How can they then talk to us about it?’ Some cultural prescriptions and demands also weigh heavily on families even if these are detrimental to adolescent sexual health and ripe with potential for infection. These include, within some PIC communities, a variety of initiation rituals involving adolescent male sex with older men, and other practices that involve sex with young girls (Herdt 1984; Baxter 2008). The combination of the challenges of the family, these new parenting situations and traditional practices with unemployment, poverty and urban migration provides a pathway to the streets in search of survival, friends or even role models. Port Moresby, Port Vila, Honiara, Chuuk and Fiji all have their share of street youth of varying ages (Plange 2001; UNICEF & SPC 2005). The vagaries of street life and survival are well known: drug and alcohol use and abuse, unprotected sex for money, sexual abuse of young girls who, with limited information and skills for negotiating, become easy prey for adult men or recruiters into commercial sex (Plange 2000). But this also should alert us to the precarious position of different categories of youth and the challenges they may be facing: those in-school, sex workers, both males and females; those out of school, factory workers, prisoners, shoe-shine boys, bottle collectors, parents, students, urban–rural drug-runners and so on.

Sexual and reproductive health education: problems within the school

Outside the family, formal education, especially, provides excellent opportunity and spaces for a consistent and sustained adolescent reproductive health education and HIV prevention education. In the absence of a cure, education remains the most potent social vaccine of tremendous promise. Recent evidence has underlined the fact that earlier formal sex education, before the age of 17, increases sexual confidence and leads to responsible reproductive health choices (Latkin 2008; Durex Network 2008:14). Within the school system young males and females are easy to reach, in very large numbers and through appropriate grade or age specific curricula dealing with sex and reproductive health including HIV and AIDS. Increasingly, the strategy of using peer-groups and outreach programs to reach out-of-school youth has been implemented in many PICs. The ICPD + 10 report documents progress in these areas. These notwithstanding, there are significant problems of cultural change and confusion yet to be overcome, including opposition from families and churches; gender related choices by parents about school attendance; and the reluctance, discomfiture or inability of some teachers to teach the specifics of sex and sexuality and reproductive health and HIV prevention as provided in the curriculum. The tendency, also, is to teach sex, sexuality and HIV prevention in a vertical (top-down and unrelated to other topics) way and outside of interpersonal relations of intimacy and affection that are the contexts for many adolescent STI and HIV infections.

In Papua New Guinea there are reports of churches showing reluctance to accept and teach the STI and HIV prevention curriculum. Some teachers are reported to be uncomfortable in teaching on the issues of sex as provided in the national curriculum; some churches and teachers are providing alternative messages to what the curriculum provides;⁶ and some teachers command so little confidence that their students feel unable to give legitimacy to what they teach. Here again I am reminded of a comment from a student I interviewed in 2000. She commented, in response to my question about who teaches sex and reproductive health, that ‘A nun came and told us about the biological functions and sex at school. It is crazy to be told about it by someone who doesn’t do it’ (Plange 2001:55). These are some of the confusions and prejudices that together deny adolescents their right to accurate information about their own development.

Yet the significant added value of education per se on positive reproductive health choices for adolescents, especially young women, cannot be overlooked (UNFPA 2009). Various studies have shown the influence of education in delaying marriages and enabling responsible reproductive sexual behaviour and health choices. Additionally, studies have shown that adoption of safe sexual behaviour and attitudes is easier if started before behaviour patterns are formed.

For HIV particularly, data from recent studies have shown the linking of ‘higher education levels with lower HIV prevalence ... [I]n particular, schooling offers an excellent means of reducing girls’ HIV risks and vulnerability

. . . and girls who complete primary education are more than twice as likely to use condoms while girls who finish secondary education are between four and seven times more likely to use condoms and less likely to be infected with HIV . . .’ (Hargreaves et al. 2008). Gender parity at both primary and secondary schools is therefore a must in the provision of STI and HIV related information, though this parity has not yet been fully attained in PICs.

A further challenge lies in trying to achieve coherence in content, if not form, and relevance to the life situations of the different categories of adolescents. Particularly problematic in this context are the rural schools, where more often than not health services and information are limited, resources are inadequate, young girls are kept back from going to school, and information on sex and sexuality is dominated by the taboo of tradition.

The messages provided within the walls of the school and the outreach programs need to be reinforced both at home and in church. In each of these settings youth voices and concerns are relevant to the discussion of critical issues of sex and sexuality, reproductive health and HIV prevention. Once again I provide a reminder of this from an earlier interview with a first year student at USP. He complained that ‘When I am in Uni and in the classroom, I am always required and encouraged to talk and express my views. When I express my views at home I get scolded for talking back’ (Plange 2001:19).

The media: an alternative source of sex education

The mass media, especially television, have been a significant agent of the socio-cultural changes within the PICs and have a major impact on young people. Certainly TV arrived at different times within the PICs but its role in education and as a source of other, and sometimes conflicting, information on adolescent sexual development and behaviour is as pertinent as its role in HIV prevention. With time the cell-phone and the internet have added to the volume of information one can access, including pornography, nudity and the predation from paedophiles and the traffickers of young females. There is no hiding from the fact that adolescents and youth are currently more adept in the utilisation of the cell-phone and the internet than their parents and herein lies the power of the technology to confront and provide alternative information, throwing up serious challenges for efforts at STI and HIV prevention. Time and again, with over-sexualised images and the subliminal seduction of TV advertising, and the swiftness of information transaction on both the net and the phone, the media provide a potent information source on sex and sexuality to challenge the apparent unyielding conservatism at home, church and school.

Earlier in my exploration of the changes in PICs and the transition crisis facing adolescents, I noted from a colleague’s writing on the impact of television that, ‘It provides an opportunity to see beyond the range of our visions; we shall discover either a new and unbearable disturbance of the general peace, or a saving radiance in the sky. We shall stand or fall by it’ (Kidder 1988). I guess we can apply this also to both the internet and the cell-phone. Combining the sexually charged lyrics and rhythms of their favoured music with youth specific personalities, dress styles, habits and behaviour, they offer more robust role models than do family and siblings, and a sense of autonomy that contests parental choices (translate as parental control). They speak in language that resonates with adolescents. They provide instances of interpersonal relations that also resonate with youth. It is these and the underlying values of adolescent development that sometimes contest and replace those provided at school and by parents, if youth are not permitted to give voice to their concerns and anxieties and receive strong positive sexual and reproductive health education at home and school. But this should not undermine the obverse, that the same media can be used to reach a large number of adolescents with positive STI and HIV prevention messages. In the end, the power of the media to reach and influence is the challenge that underlies both forms of its utilisation, beneficial or harmful. The choice is there.

Alcohol and drug use and adolescent sex

Of no less importance among the challenges facing adolescent reproductive health education, and STI and HIV prevention, is drug and alcohol use and abuse among Pacific youth. The relation between drug and alcohol use and teenage sex and sexual violence including rape has been noted. In almost all PICs drugs, particularly marijuana, and alcohol appear to be easily accessible and are consumed frequently though with notable differences between males and females. In the earlier Apia Study (UNICEF 2001), the Youth in Solomon Islands study (SPC 2005) and data from Papua New Guinea, Tonga and other island countries in Micronesia and Polynesia, adolescent alcohol and drug abuse is identified as being problematic. The Solomon Island study correctly linked this to despair and conflict faced by adolescents who are unemployed and searching for their place in and guidance from

society. The lack of inhibition that drug and alcohol use leads to provides enabling situations for poor decisions on sex, including situations of sexual violence unleashed on both young boys and girls by ‘friends’ or drunken males soliciting sex for money. With the difficulties in partner tracing, STI clinics have been particularly unable to ‘get in on the ground floor’ with this kind of information. This is compounded by the stigma attached to HIV, as well as the many unfriendly counselling and testing sites available to youth seeking help.

These are only some of the challenges faced by the Pacific Regional ARH project as it seeks to define and develop new initiatives to meet the unmet reproductive, sexual health and HIV prevention needs of adolescents, especially adolescent females, in the South Pacific region. The regional initiative has developed an enabling environment for the provision of reproductive health information and services to youth and adolescents. The project recognised the distinct and diverse interests of young people, and the need to adopt innovative strategies to address ARH issues. The involvement of theatre by Wan Smol Bag in Vanuatu, the creation of youth-friendly clinics, the use of youth recreational centres to engage youth in ARH dialogue and discussions and the increasing use of peer education are some of these forays.

Conclusion

The issues raised in this paper indicate the challenges ahead as much as the small advances that have been made in adolescent sexual and reproductive health, and STI and HIV prevention. Nevertheless, the figures across the countries point to the work ahead, particularly in combating STI, as they represent potent markers for HIV infection and transmission. Papua New Guinea, perhaps, should provide an exhibition case wherein PICs may look to see the consequences of delayed action and denial, as well as the need for innovative strategies for intervention as early as possible, and robust and vocal leadership at all levels, the kind of leadership that will mobilise the nation, articulate the important areas of change in gender relations, sexual behaviour and practices that are anchored in tradition, culture and religion. There are also structural issues that need attention, as they act collectively or singularly to predispose youth to unsafe sexual behaviour in the context of available and accessible services. Among these, the roles of the identified gatekeepers are of critical significance. I have alluded to some of the prevailing challenges and confusions inherent in the roles they are called to play and the dilemmas they face as they are required to address issues that they are yet to be comfortable with or have never experienced in their own sexual histories. Among the youth themselves, too, the media, and their conflicting interface with culture, the law and adult seduction, play vividly to the constant demands of age related desire and pleasure seeking in intimate relationships, and identity formation. While a lot has been achieved since the ICPD, the question we need to ask, in the face of the lessons learnt so far is, where do we go after ICPD + 15 and what are the challenges that still loom in the future?

Facing up to the challenges: some recommendations for action

Facing up to the challenges I have outlined requires us to revisit origins and carry out a review. There is no doubting of the relevance of the Cairo ICPD. It was as groundbreaking as it was timely. In particular, it shifted the discourse on population policy away from just managing population growth, especially among developing countries, to recognising individual health and rights within the development agenda. Further on, ICPD + 5 underlined the rights of adolescents to ARH and recommended action to provide appropriate and accessible adolescent-friendly services. The Millennium Development Goals added weight to this in addressing the needs of young people.

To turn the tide of increasing STIs among Pacific youth and prevent the slow but rising HIV prevalence—and in Papua New Guinea the dramatic increase—we need first to go beyond policies, facilities and services that many PICs have now provided, to look at the implications of this service provision for both the service providers and the recipients. Secondly, we cannot dissociate adolescent STI and HIV vulnerability and infections from the general situation of sexual practices and the strong need for sexual behaviour change among the adult population. Thirdly, we need always to be reminded of the social drivers of STI and HIV transmission. In the light of these and the issues that have been raised, a few recommendations are provided, but only as a complementary contribution to the appreciable and ongoing efforts in facing the challenges of STI and HIV prevention in the PICS.

Recommendations

- 1 Reach wider to the adult population with relevant information on STI and HIV prevention, including particularly condom use and multiple concurrent sexual relations.
 - Encourage and support the development of integrated STI, HIV and AIDS Reproductive Health Workplace Policies that provide awareness sessions at the workplace.
 - Use existing Parent–Teacher meetings as forums to discuss and share information on adolescent STI, ARH and HIV prevention issues.
 - Use the available community mobilisation approaches to inform community leaders on ARH and HIV prevention.
 - Train more community health workers in participatory skills of engagement to work as part of remote and rural communities in addressing the issues of sexual practices and STI and HIV prevention.
- 2 Strengthen STI, RH and HIV prevention education in the education system.
 - Provide participatory teaching skills for all teachers within the formal education system as a method for teaching STI, ARH and HIV prevention as the social vaccine to protect youth.
 - Consider involving youth in designing best ways of addressing sex and sexuality in the school curriculum.
 - Intensify and build on the advances in girls' education towards achieving 100% parity at all levels.
 - Start sex, reproductive health and HIV education at an early age within the school system.
 - Use PLHIVs (people living with HIV) and ex–teenage mothers and fathers as part of the STI and HIV teaching resources in the school.
 - The life-skills approach must include skills that impart to school children and youth the social importance of respect, rights and responsibility in intimate relations.
 - HIV and AIDS awareness and the required behaviour change must be integrated into subjects such as nutrition, health and social studies and should not exist as stand alone vertical topics.
 - Re-think the teaching of sexual health and HIV prevention as part of intimate and love relations and not primarily as health and disease avoidance issues.
3. Empower the family as the primary and immediate gatekeeper on child and adolescent development to deliver effective, relevant and appropriate information on STI and HIV prevention.
 - Utilise appropriately trained community workers to engage families in dialogue to address the issue of sex as a taboo at home.
 - Hold community participatory forums with trained community workers in participatory skills to talk about and inform on talking about sexuality at home as part of youth growing up.
 - Consider holding parent–teacher–adolescent forums on gender relations.
 - Train more community leaders and pastors to assist families.
4. Intensify awareness and visibility of condoms as a protective measure against STI and HIV infection.
 - Design innovative ways to encourage condom use within PICs.
 - Include appropriate condom use as part of STI and HIV awareness and life- skills teaching for in- and out-of-school youth.
 - Continue to use the media to provide information on condom use.
 - Provide friendly and innovative access for adolescents and youth to both male and female condoms.
5. Explore the most effective and innovative ways of using the opportunities provided by the media, especially television, radio and the internet.
 - Undertake research to provide evidence on the extent to which Pacific youth make use of internet and TV as sources of sex and sexuality information.
 - Continue support to Wan Smol Bag (or similar initiatives outside of Vanuatu) to address issues relating to the consequences of parents' reluctance to talk about sex and sexuality with adolescents.
6. Include teaching about the relationship between alcohol and drug use, STI, reproductive health and HIV transmission.
 - Regulate youth access to alcohol.
 - Seek expertise on harm reduction to design interventions to prevent marijuana use.
 - Publicise the negative health and behaviour consequences of drug and alcohol use through media, including Wan Smol Bag and similar live performances.

7. Document unmet challenges in STI, ARH and HIV prevention for PIC youth.
 - Undertake a needs assessment of service providers and youth recipients to identify gaps in the current services.
8. Provide employment experience for the youth.
 - Engage government and especially the private sector to plan youth work experience schemes to accommodate the unemployed youth and provide work experience.
 - Implement, or create, youth volunteer schemes to absorb the large number of unemployed youth.
 - Intensify the existing training of youth in income generating activities and ensure the linkage of these to markets.
9. Seek an understanding of the perception of risk among the different categories of youth and use the information to assist in designing new interventions.
 - Commission an across-countries survey on how Pacific youth perceive and understand personal risk of infection with both STI and HIV.

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Notes

- a International Conference on Population and Development, Cairo, 1994, UNFPA.
- b These include syphilis, gonorrhoea, chlamydia and more recently, HIV.
- c Further evidence was provided by observations and communication with youth in Papua New Guinea. In the Pacific region as a whole, a UNDP study around the turn of the century confirmed this; so do studies on Kiribati.
- d Comments and concerns were also expressed by the administrative and political leadership in the Autonomous Bougainville Government.
- e These statements are based on communication with NGO reps in Mt Hagen, Western Highlands Province, Papua New Guinea, July 2009. In Papua New Guinea the Catholic Church has produced a sex education document titled ‘Dare to Love’; some of its messages on sex are inconsistent with the sex and HIV prevention information in the national curriculum.

Discussion

- It could be that HIV is result of social change, that social/economic transformation is a factor.
- There has been a reinforcement of patriarchy in the community in the recent past, such as in the case of the glorification of the military.
- HIV has been part of ongoing social change, of mobility and social network change. In the wake of HIV and our realisation of the potential effect of HIV/AIDS on society it has become crystal clear that for us to grapple with it effectively we have to change some of the values and beliefs of our culture. HIV is a disease of pleasure. Sex is pleasurable, but if you don't do it properly the consequences are STIs. HIV actually provides an entry point to respond to sexual beliefs and practices, gender relations and structures that reinforce patriarchy, and then be able to go beyond. That's why I make a distinction between gender and masculinity. Masculinity is a set of beliefs and practices. We really need to disentangle this, look at the belief systems in society and how we can effectively change them to respond to the advent of HIV/AIDS in Pacific Island countries. We need to move on to be able to use a specific vocabulary that will create a realistic image of unprotected sex for youth.
- If we are looking at spending more on health, where does the budget increase come from and can we increase it without huge over expenditure, in a context of increasing expenditure on something such as the military? When considering funding for non-communicable diseases, it could be also that the focus on HIV/AIDS may be taking away funding from things that may actually result in better health.
- The increased amount of money provided for HIV/AIDS is in recognition that something had to be got going in all sectors of society. It is also an opportunity to improve health services and their delivery. How else will countries be encouraged to get together to discuss their problems instead of accepting the earlier UN model when all UN agencies were working in parallel to each other, until they chose AIDS as a cross cutting issue. As a result more funding became available, the Global Fund was set up and used to fund many highly diverse projects and issues, for instance governance. This was challenged until the links between HIV and governance were shown. Because of the silence surrounding HIV, it is way behind other matters. Because of not being allowed to talk about sex matters, a lot of people are still in the dark.
- All we need to do is change funding for health to present it as an issue of productivity and economic development. We are always presenting health in connection with illness, which is seen as wastage. To present it as a matter of keeping people healthy and productive, adding to economic benefit, would change attitudes towards expenditure on health services.
- The integration of services is often difficult to measure, especially when it comes to impact, and often there is a need to look at a specific targeted intervention. We have HIV and STI programs that are designed to work in a vertical fashion. The programs have been developing for a while and now it is seen that there is still need for integration. So there is a shift to linkages, to linking other programs in health services. A program that is seen as working well is linked with another program to share resources.
- There is a need for youth friendly services and around the region there are successful projects by NGOs and youth groups through activities such as drama and sport. What are the three main barriers to upscaling these responses to effectively reaching youth to prevent HIV/AIDS? We older people need to change our understanding and attitudes to understand the youth. Leadership skills need to be developed. We are good at telling people about content but not so good about the how to communicate. For example to use drama, these skills have to be drawn out, they are not innate. We need to look at the how as much as the content of what we are teaching. There is a disparity between the amount of research conducted in comparison with the dissemination of practical information at grass roots level. We should knock on every door, go to provincial

offices, district offices. In Papua New Guinea there has been a shift to teach people in districts and provinces to measure the response, where they are more in tune with sexual beliefs and practices. It is shifting away from central planning to a decentralised response planning.

- HIV in the region is heavily biased, we pay particular attention to youth. But youths are a product of adults. Has any program looked at parents instead of just youths?

Strategically we talk about evidence-based strategies and planning and statistics show HIV has become a disease of young people, for all sorts of reasons, so the thrust is related to them. If you don't maintain your health at 18 and 19 you may not live too long. But there are programs for adults also. We should not disassociate youth programs from the general population, for example for condom use.

- What is the role of formal education, do all students receive, at appropriate ages, education in human biology to form a basis for understanding?

A family life program has begun in Fiji but needs to go a lot further to other countries. It is basically a life skills program taught at appropriate ages, and brings in issues such as contraception. It is the other side of the coin to youth services

- Why is there such a low use of female condoms?

Female condoms are not well promoted in the region. There has been some attempt by some health programs to promote it as one of the ways of STI/HIV prevention, but the results we get are not surprising because no-one actually has access to them in the community.

- A business coalition against HIV/AIDS has been very successful in PNG, where it is the biggest distributor in the country of condoms in the workplace. When businesses are convinced of the link between HIV and violence against women and absenteeism, they put their money into it.

Plenary 7

Violence against women: a development challenge for PICs

Janet L Fanslow

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Violence against women: development challenges for Pacific Island countries

Janet L Fanslow

Violence against women: definitions

No good researcher would begin without defining her terminology. Here are the internationally accepted definitions that I work with.

The World Health Organisation has developed a “typology of violence”. This encompasses self-inflicted violence (suicide and self-harm), interpersonal violence (including violence by intimate partners, other family members, and strangers and acquaintances) and collective violence (violence inflicted for social, economic or political reasons). Violence within any of these categories can be inflicted physically, sexually, psychologically, or through deprivation and neglect (Krug, Dahlberg & Mercy et al. 2002).

Clearly, violence against women occurs in all of these categories. However, the term “violence against women” (VAW)—sometimes called gender-based violence—also focuses attention on the fact that women are often targeted for interpersonal violence (family and collective) because of their gender and the role they play in society.

The UNFPA defines gender-based violence (GBV) as:

violence involving men and women, in which the female is usually the victim; and which is derived from unequal power relationships between men and women. Violence is directed specifically against a woman because she is a woman, or affects women disproportionately. It includes, but is not limited to, physical, sexual and psychological harm (including intimidation, suffering, coercion, and/or deprivation of liberty within the family, or within the general community). It includes violence which is perpetrated or condoned by the state. (UNFPA 2009)

One example of gender-based violence is intimate partner violence (IPV). According to the World Health Organisation, IPV is defined as the intentional use of physical force or power, threatened or actual, against an intimate partner (e.g., spouse, cohabiting partner, date) that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation. This definition encompasses physical, sexual, and emotional or psychological abuse (Krug et al. 2002).

The scale of the problem

Definitions are important because, without them, we cannot establish reliable and scientifically robust estimates about the magnitude of the problem we are dealing with. Fortunately, epidemiological work from a host of countries over the past two decades has provided us with a historically unprecedented base of information on the scale and impact of violence against women.

A cornerstone of this knowledge is the WHO multi-country study on women’s health and domestic violence against women (WHO 2005). The purpose of the study was to establish internationally comparable prevalence rates of IPV, and to begin to document the health burden created by violence against women. The original study was conducted in ten countries and surveyed over 24,000 women aged 15–49 years. Since then, a number of other countries have replicated the multi-country study methodology.

From the original ten countries involved in the WHO multi-country study, estimates of the proportion of ever-partnered women who experienced physical or sexual violence by an intimate partner across her lifetime ranged from 15% (in one city in Japan) to 71%, (in a province in Ethiopia). The percentage of women reporting physical or sexual IPV in the year prior to the survey ranged from 4% (in cities in Japan, and in Montenegro and Serbia) to 54% (in a province in Ethiopia) (WHO 2005).

Samoa was the only country from the Pacific included in the first wave of the multi-country research. IPV prevalence estimates from this study (also known as the Samoa Family Health and Safety Study), indicate that 46% of ever-partnered women in Samoa reported experiencing physical or sexual violence in their lifetime, and that 22.4% had experienced this violence in the 12 months prior to the survey.

Very recently (in 2008), Kiribati and Solomon Islands replicated the multi-country study methodology. Findings from Kiribati indicate that 68% of ever-partnered women report that they have experienced physical or sexual violence by an intimate partner in their lifetime, and a 12-month prevalence of 36.1% (SPC 2009a).. Women from Solomon Islands reported a 63.5% lifetime prevalence of physical or sexual IPV, and a 12-month prevalence of 41.8% (SPC 2009b).

Having the ability to compare prevalence internationally is important for a number of reasons. At its most fundamental, variation in rates between countries tells us that violence against women is not an inevitable part of human nature. If violence were an intrinsic part of human nature, we would expect to see comparable rates of IPV across all of the nations that have been surveyed, but this is not the case. Instead, we see considerable variation in rates between countries, which suggests that violence against women is influenced by factors other than human nature, and that it is not inevitable.

At the strategic level, international comparisons can be useful because no person, and no politician, wants to have their country listed in the “worst performers” category. Finding out that your home or country is, sadly, in this category can be very motivating to mobilise the human and financial resources necessary to try and change things for the better.

Locally and regionally, reliable prevalence estimates are important because they allow no “wobble room” for continuing to ignore a vitally important issue. Local data, from local women, identifying clearly that this is a problem they are facing, carries a powerful imperative towards action. Regional data, showing that the problem is shared, indicate the advantages of pooling resources, insights, ideas and programs of action. We can all benefit from not reinventing the wheel, and there is a particular need to develop, implement and evaluate programs that are culturally aligned and appropriate, and that build on strengths inherent within all communities.

The impact of VAW and intersection with population development goals

Violence against women is fundamentally wrong, at both a moral and an ethical level. However, making this argument by itself is seldom successful in alleviating a problem that is held in place by a wide range factors, including beliefs that such behaviour is “traditional”, “normal”, or even “required as a method of discipline” (Ali 2006). Challenging these beliefs and mobilising action against violence requires increasing understanding of the health, economic and social costs of VAW and how VAW interferes with other goals that are held by countries. In this section, I review a small proportion of the research literature outlining how VAW affects a number of issues discussed in this symposium.

Obesity and nutrition

The experience of violence has implications for obesity and nutrition. The relationship has been most directly established for children; childhood exposure to violence and other bad experiences has been linked with physical inactivity and severe obesity, as well as other adverse health outcomes (Felitti, Anda & Norden berg et al. 1998). I have heard anecdotal reports from victims of childhood sexual abuse, who described deliberately becoming severely obese in the hope of protecting themselves from further assault. I have also heard reports from victims of intimate partner violence, who described extreme cases of overeating as a means of self-consolation or numbing following episodes of abuse.

The experience of violence also has implications for nutrition, both for women and for their families. This relationship has been best described in the context of collective violence, where much of the mortality and morbidity among civilians during wartime results from the destruction of infrastructure, such as food and water supply systems. This leads to food shortages and malnutrition, as well as diseases caused by the contamination of food and drinking water (Sidel & Levy 2008). More directly, violence and threats of physical or sexual violence against women can impact on women’s ability to access water, or undertake the pastoral work necessary to feed themselves and their families (Leslie & Boso 2003). While these acts or threats of violence may come from men outside the woman’s family, a woman’s movements may also be restricted by an extremely jealous partner. The relationship between hunger and malnutrition can also work the other way, by contributing to vulnerability to violence and sexual exploitation as women and children trade sex for food (SPCb 2009).

Mortality and morbidity

Reduction of mortality and morbidity is an important goal for all nations, in order to maintain a productive population and reduce economic and social costs associated with treating those who are ill. Violence against women is an important cause of both mortality and morbidity. VAW contributes to premature death in a number of ways. Most directly, VAW can lead to death through femicide, the murder of women. VAW also contributes to premature death through suicide. All countries that have contributed data to the WHO Multi-country Study have reported increased rates of suicide attempts among women who have experienced intimate partner violence (Garcia-Moreno, et. al, 2005).

Violence against women also contributes to morbidity. There are documented associations between women's experience of IPV and a wide range of physical and mental health problems, including not just injuries, but problems walking, pain, and difficulty performing usual activities (Garcia-Moreno, et al, 2005). The World Report on Violence and Health identifies associations between violence against women and an extensive range of reproductive health and chronic diseases, some of which are given in Box 1.

Box 1 Health effects associated with violence against women

Physical: Abdominal/thoracic injuries, bruises and welts, chronic pain syndromes, chronic disease, disability, fibromyalgia, fractures, gastrointestinal disorders, irritable bowel syndrome, lacerations and abrasions, ocular damage, reduced physical functioning

Sexual and Reproductive: Gynaecological disorders, infertility, pelvic inflammatory disease, pregnancy complications/miscarriage, sexual dysfunction, sexually transmitted diseases, including HIV/AIDS, unsafe abortion, unwanted pregnancy

Psychological and Behavioural: Alcohol and drug abuse, depression and anxiety, eating and sleep disorders, feelings of shame and guilt, phobias and panic disorder, physical inactivity, poor self-esteem, post-traumatic stress disorder, psychosomatic disorders, smoking, suicidal behaviour and self-harm

Source: World Report on Violence and Health (Krug et al. 2002).

Intersection of violence against women, reproductive health, STIs and HIV/AIDS

In addition to the reproductive health effects associated with violence against women that have been described in Box 1, work from New Zealand exploring the association between IPV and reproductive health has highlighted some significant issues that need to be taken into account in family planning and other reproductive health settings. These include:

- Compared with women who have not experienced IPV, women who have are more likely to use contraception, and to have a partner who refuses to use condoms, or who prevents the woman from using contraception (Fanslow, Whitehead & Silva et al. 2008).
- Women who have experienced IPV are more likely to have had miscarriages and a termination of pregnancy (abortion) than women who have not experienced IPV (Fanslow, Silva & Whitehead et al. 2008).
- Women's experience of violence during pregnancy (most inflicted by their partner) is linked with behaviours (e.g. smoking) and responses (e.g. pregnancy intendedness) that may contribute to long-term risks for children (Fanslow, Silva & Robinson et al. 2008).

A recent, comprehensive review highlights how violence against women and HIV/AIDS intersect in a complex web (Campbell, Baty & Ghandour et al. 2008). Points raised by the review are that:

- epidemiological studies show significant overlap in prevalence of HIV and IPV
- IPV is a risk factor for HIV infection in women and men
- both past and current violent victimisation increases HIV risk behaviours
- violence/fear of violence can be an impediment to or a consequence of HIV testing
- IPV is a risk factor for other sexually transmitted infections (STIs), which increases the rate of HIV infection
- abused partners have difficulty in negotiating safe sex behaviours with abusive partners

- adverse health effects associated with IPV compromise women's immune system in a way that increases their risk of HIV
- abusive men are more likely to have other sexual partners unknown to their wives.

While further research is needed to fully understand issues of causality, the review concluded that there was sufficient evidence to advocate that programs to prevent HIV need to also advocate for changes in male behaviour. Specific recommendations include developing efforts to reduce male use of violence against women and male HIV risk behaviours in intimate partnerships, such as reducing multiple and concurrent partnerships (Campbell et al. 2008). It is also clear that existing and planned HIV/AIDS program need to increase their understanding of the dynamics around violence against women, and incorporate violence prevention and intervention efforts into their program of action.

What do we mean by development?

At the risk of re-visiting what is likely to be well-trodden ground, I would like to consider briefly this idea of “development”, the definitions that are applied to it, and the implications of these for our discussion of violence against women. Clearly, the basis for this meeting is to consider “population development”, which, for me as a newcomer to the field, begs the question: What is the population developing towards?

One aspect of development is clearly “economic development”. This is a critical issue for violence prevention efforts, as we know that poverty is strongly linked with violence. One of the ways this works is through the “push” of poverty, which, for example, leads people to leave rural areas in the hopes of joining the cash economy near cities. Graham Roberts from the Fiji School of Medicine articulated some of these issues in his paper, *Masculinity, mental health and violence in Papua New Guinea, Vanuatu, Fiji and Kiribati*. In particular, Roberts (2007) notes that, while seeking to establish themselves in the cash economy, young men can become disconnected from traditional arrangements of reciprocity and live in poverty on the urban fringes, a situation that fosters aggression and violence because their basic needs are not met.

Unfortunately, violence prevention is not always achieved even when people are “pulled” to situations of employment. The Solomon Islands Country Supplement to the report *Violence against women in Melanesia and East Timor: building on regional and global promising approaches*, describes how the logging and fishing industries in Solomon Islands contribute to the sexual exploitation of girls (AusAID 2008). Reported cases include child prostitution; early marriage and the sale of children into marriage by parents or third parties; and children being used to produce pornography as subjects and as participants in viewing. Young boys are also reported to be involved in the process, as they are given money or alcohol by loggers to arrange for meetings with young girls. One of the factors contributing to the problem was identified as the lack of monitoring in logging camps, which not only allows loggers easy access to children, but also means they are not held accountable for illegal actions (Herbert 2007, cited in AusAID 2008).

It is not all bleak news, however. One of the most promising studies to emerge documents how economic development strategies can go hand in hand with efforts to promote gender equity and reduce violence. The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) study is a community randomised controlled trial in eight villages in South Africa. It was conducted as part of a partnership between the London School of Hygiene and Tropical Medicine and the University of Witwatersrand School of Public Health in South Africa. Phase One of the study involved working with a local micro-finance program for women, to add ten educational sessions to the compulsory loan meetings. Topics covered in the educational sessions included gender issues, domestic violence, sexuality and HIV, and skill-building for communication, conflict resolution, solidarity and leadership. Phase Two worked to assist participants to take concerns to the wider community by providing additional support to a natural leader from the group. Positive findings from the study included improvements in economic indicators of well-being (e.g. improvement in household assets); positive trends on all indicators including self-confidence, challenging gender roles, communication with household members and partners, progressive attitudes toward violence, and autonomy in household decision-making. Very importantly, a 55% reduction in past-year experience of physical and sexual violence was reported (Watts 2008).

Qualitative data collected as part of the IMAGE project suggest that reductions in violence may be supported by changes in the women's relationship, a shift in women's attitudes toward violence, and an increased self-confidence linked with their ability to earn an income, which also contributed to increasing the woman's status within the household. Other positive benefits noted included fewer conflicts over finances, and women's greater confidence in their ability to resolve conflict by improved communication with their partners (Watts 2008).

Mental health development

The field that I teach in, Mental Health Promotion, is about the importance of fostering mental health (not merely the absence of mental illness) on a population level. Criteria for “diagnosing” mental health at the individual and population level have been developed, and include: a) positive emotions (positive affect, avowed quality of life), b) positive psychological functioning (including self-acceptance, personal growth, purpose in life, environmental mastery, autonomy, positive relations with others) and c) positive social functioning (such as social acceptance, social actualisation, social contribution, social coherence and social integration) (Keyes 2007).

Before we dismiss these things as “nice to have, but not essential” it pays to look further at Keyes (2007) work. He has documented how individuals who are flourishing (completely mentally healthy) have the fewest physical health problems of any group and is the most economically productive group. He also reports that flourishing is the goal that many individuals say “they have wanted all along”.

You will have to bring your own knowledge to bear when you consider if these criteria for mental health are likely to be relevant in a Pacific context. Whatever answer you arrive at, I do think it is worth being clear on the development goals you are seeking for the people in your country. Pursuit of “development” blindly, has the potential to merely recreate the problems in western nations (Fanslow 2009) in a Pacific context, without considering the destination you are truly striving for.

Gender, equality, empowerment of women,... and “culture”

A key recommendation of ICPD is that of promoting gender equality and empowering women. Violence is clearly a gendered issue, with global statistics documenting the fact that men are most likely to be the perpetrators of violence, both against other men and against women (Krug et al. 2002).

Multiple agencies internationally and within the Pacific have advocated that women’s empowerment and promotion of gender equality need to be key platforms of both population development (WHO 2008) and of violence prevention (WHO 2009). Recommendations to achieve this include ensuring universal primary education, and addressing cultural norms about the roles of women in society (WHO 2009).

One of the points of evidence that supports these recommendations is that Pacific women living in New Zealand (Fanslow, Robinson & Crengle et al. in preparation) report lower rates of IPV (33% lifetime prevalence) than women living in the Pacific (Samoa – 46%, Kiribati – 68%). While this is only a rough comparison, as the Pacific sample from the New Zealand study includes a mix of Pacific people, and does not distinguish between Island-born and New Zealand-born, it is suggestive of the fact that there is a range of factors in New Zealand which mitigate the experience of violence, such as the presence of universal education and greater gender equality. Other possible factors include: greater access to employment for both men and women, and greater availability of services and legal protection for women who do experience violence.

This is not to say that “developed” countries have all the solutions to violence prevention. New Zealand still has unacceptably high rates of VAW, with a lifetime prevalence of IPV among women of about 33% (Fanslow & Robinson 2004), and, as with other countries in the region, the understanding of the impact this has on a population basis is relatively new. As a consequence of this, New Zealand is still learning how to expand its efforts beyond developing and implementing effective responses to violence after it occurs. Current efforts are under way to actively develop a culture that does not condone or accept violence against women. As a basis for discussion, I would like to briefly review a few of New Zealand’s initiatives around “family violence prevention”. The lessons being learned there could possibly be adapted and applied in Pacific countries.

New Zealand, like many other western countries (and perhaps countries in the Pacific) started their responses to violence against women by establishing refuges to provide emergency options for women to escape from violent situations. In the 1980s and 1990s efforts shifted to recognising the importance of involving the criminal justice sector in responding adequately to perpetrators of intimate partner violence. In 1995, the Domestic Violence Act was passed, defining violence broadly to include physical, sexual and psychological abuse, and extending protection to a individuals in a very wide range of domestic relationships. Efforts continue to ensure that it is properly implemented (Fanslow 2005)

In the 1990s, efforts to engage the health sector in earlier identification and referral of victims of violence started, on the premise that early intervention might minimise some of the more serious and long-term consequences of violence. One of the strengths of this approach, particularly within the health sector, has been the recognition that the behaviour of individual clinicians is strongly controlled by the system they work in. Therefore, much of the emphasis of the work has been to foster system change, including working to ensure that there is policy and managerial support for early identification and response to victims, that the physical environment is conducive to asking about abuse, and that appropriate referral links have been established. Monitoring of hospitals and district health boards on these dimensions has shown consistent improvement over the past four years (Koziol-McLain, et al. 2009). Cautionary lessons include: do not rely on training alone to create change; build in feedback loops to ensure that the responses are on-track with what you are trying to achieve; and know that the changes you are trying to make, for the women and for the health systems, are long-term investments (Wills, Ritchie and Wilson 2008).

In the 2000s, we started to get more data about the population prevalence of violence against women, and strong political will under the Labour-led coalition government was instrumental in establishing efforts to “create a culture of non-violence”. Many things have been put in place to support this work, including government ministry groups and the Taskforce for Action on Violence Against Families, which involved the chief executives from key government ministries. One of the major strands of work arising from this has been the Campaign for Action on Violence within Families. This is a multi-strand activity with the stated goal of running “A social marketing program to change how New Zealanders think and act about family violence”. The intended audience is really all New Zealanders, but with the understanding that the program would also need to cater for perpetrators of violence, victims, social “influencers” (informal and formal community leaders), those involved in the process of education and enforcement around family violence, and activists.

Multiple strands of action have been put in place as part of the Campaign, including two waves of a media campaign, designed first to define family violence, and benchmark the behaviour as “it’s not OK”, and then to promote stories of positive change, including perpetrators who recognised the negative impacts of their violence on their own lives and the lives of their families, and who were engaged in “turning their stories around” (www.areyouok.org.nz). The media campaign has been supported by funding for community action projects, designed to enlist local communities in taking ownership of the problem of family violence, and develop local responses. Media advocacy has also been undertaken, involving training media personnel on reporting cases of family violence in ways that do not reinforce myths about it, and training NGOs and others in how to work with the media to support informed coverage of family violence incidents. The Campaign has recognised the importance of establishing cross-sectoral partnerships, and has worked to include and define roles for local councils, sports groups (professional and community), businesses, and ‘ordinary folks’ to support the campaign messages. The Campaign has also worked to get support from popular culture ‘heros’ from the TV and music industries.

There are considerable strengths in the approach that has been taken so far. Importantly, it has included high level policy support, which has been instrumental in making the funding and human resources available to undertake this work. I have heard arguments that have linked this support with the high proportion of women in senior positions in parliament at the time, a situation which is notably different from that in many Pacific countries (Commonwealth of Australia, 2008: Solomon Islands Country Supplement, Violence Against Women in Melanesia and East Timor).

Another strength has been the multiple strands of activity that have been undertaken, and the recognition that multiple sectors need to be involved in order to change society. A helpful conceptual model that I think has informed this response is the coordinated community response model, which depicts key sectors of society, and suggests ways in which each can contribute to the elimination of violence against women (Figure 1). Recently, adaptations of the model, such as specific reference to *whanau*, *hapu* and *iwi*, have been developed to make it still more applicable in the New Zealand context (Hann 2009, personal communication).

Limitations to the work of the Campaign include the fact that evaluation of its impact has been minimal. Without adequate baseline data, it will be hard to tell if we are really making the difference that we hope to. And while there are extremely encouraging anecdotal reports of an increased number of men seeking help for their use of violence, it is not clear yet that we are putting the systems in place to help them once they make contact. These are issues to be concerned about, but ones that could be dealt if there were commitment to, and understanding of, the fact that what we need is a sustained response, not one subject to the vagaries of political whim. It remains to be seen if New Zealand has that political will.

Figure 1 Coordinated community action model

Finally, I think one of the limitations to the Campaign to date (which also could be remedied in time), is its failure to address the issue of gender. Much of the work from New Zealand has been accomplished on a platform of “gender neutrality”, or has focussed on what can be done to alleviate the problem, working with, or setting up services for women. This is somewhat odd, given the data we have, identifying men as by far the most common perpetrators of violence.

Understanding issues of masculinity and its links with violence has also been identified as a fundamental issue in the Pacific. Roberts notes that not only is aggression and violence more likely in situations where people's basic needs are not met, but also when people who do not have ties with traditional social structures form new alliances (and everyone has a fundamental need to belong and feel connected with others) that are not governed by traditional norms (Roberts 2007).

Interestingly, this sounds a lot like the for diagnosing mental health. It reminds us again that one of the goals of development may really need to be about fostering communities where individuals have a) positive emotions about themselves, b) positive psychological functioning, and c) positive social connections. Failure to do so may mean that women, children, and men will pay the price in terms of increased violence, poorer health, and failure to live full and happy lives.

Where do we go from here?

In 2008, the USA Institute of Medicine produced a workshop report: Violence prevention in low- and middle-income countries. Among the resources in the book is a “Logical framework for preventing interpersonal and self-directed violence in low- and middle- income countries” (Zaro, Rosenberg & Mercy 2008: 168). The framework contains five key recommendations for action (Box 2).

Box 2 Key recommendations for action**1. Leadership**

- Develop participatory, multi-sectoral, and multi-disciplinary collaborations and a coordinating mechanism
- Develop, implement and monitor a global plan as well as national action plans
- Strengthen and fully utilize those agencies and organisations with comparative advantage vis-à-vis global violence prevention
- Advocate for, communicate about, and build political will to expand resources and funding
- Promote adherence to existing international laws, treaties, and protections of human rights, and sponsor new ones as needed

2. Research and data collection

- Create a country-driven, collaborative process to develop data standards, including elements, definitions and methods for data collection, sharing and dissemination
- Identify data providers, users, needs and gaps
- Develop comprehensive multi-sectoral data collection systems, including surveillance systems, at the country, regional and national levels
- Collect and analyze data that will illuminate the root causes, risk factors, costs, and inter-relationships among different types of violence

3. Capacity building and dissemination

- Develop information, technical assistance, and training systems to support implementation of evidence-based prevention strategies and victim services
- Develop prevention and treatment systems that integrate key sector involvement in implementation of evidence-based strategies
- Translate and disseminate information on violence, evidence-based prevention, and treatment and their successful implementation strategies
- Assure the needed management capacity and human resources to effectively implement, manage and evaluate violence prevention interventions and treatment services

4. Intervention development

- Increase safe, stable, & nurturing relationships between children and their parents/caretakers
- Reduce availability and misuse of alcohol
- Reduce access to lethal means
- Promote gender equality
- Change cultural norms that support violence
- Reduce recidivism among perpetrators
- Improve criminal justice and social welfare systems
- Reduce social distance between conflicting groups
- Reduce economic inequality and concentrations of poverty

5. Victim Services

- Develop and test strategies to:
 - engage the health sector in violence prevention to identify victims and help them prevent future violence
 - educate health care providers about intersection of violence and other health problems
 - link health care, social services and police services
 - provide culturally appropriate mental health and social services for victims of violence
 - improve emergency response to injuries from violence

These are worthwhile starting points, and I hope they will be the basis for action towards preventing violence in Pacific in the future.

Draft Recommendations/Action Points linked to the Logical Framework

1. Leadership
 - a) Identify leaders in key sectors of each community/nation.
 - b) Initiate discussions individually and together to assist leaders to identify their role in responding to violence against women.
 - c) Provide concrete suggestions on actions that leaders can take.
2. Research and data collection
 - a) Disseminations of existing information. Make use of the completed (and planned) studies of violence against women to raise awareness of the relevance of the issue for local communities/countries (e.g., through small group or one-on-one discussions with community leaders). Discussions might focus on health, and psychological and social costs, in order to change perceptions about perceived “inevitability” of the problem. Concentrate on reaching those who are most likely to be “initiators”, and who might support development of new programs.
 - b) Recognise that the process of data collection itself has raised awareness and increased capacity. Think about ways of utilising the skills and resources of the interviewers, and about supporting the women in the communities where the interviews took place.
3. Capacity building and dissemination

Choose one or two programs that have evidence of effectiveness, and resource these properly in a small number of locations. Once success has been achieved, others can learn from these “pilot” sites (e.g. the IMAGE study).
4. Intervention development

Choose one or two of the goals listed in the Logical Framework above, and develop action plans for achieving these. Make sure the action plan includes named individuals/organisations responsible for achieving the steps in the action plan, and set deadlines.
5. Victim Services

Identify one or two key organisations (e.g. health organisation, faith community) that do (or might) assist women and children who are victims of violence, and provide financial and infrastructure support, training and capacity-building to enable them to extend their services.

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Incidence, forms and prevalence of violence against women in the Pacific

Edwina Kotoisuva

Violence against women and children is prevalent throughout the Pacific region across all ethnic and socio-economic groups. Documentation and client statistics from the Fiji Women's Crisis centre (FWCC), its regional network members and AusAID's Office of Development Effectiveness (ODE) report indicate that there is significant under-reporting of the problem and that it occurs in all its different forms.^a Domestic violence within the family includes a range of types of physical abuse: abuse using hands, feet and objects, including weapons; mutilation (using hot water or objects); deprivation of food; emotional violence, including humiliation and verbal abuse; a range of controlling behaviours restricting contact with family or friends and access to education, health care and work; sexual violence, including rape within marriage, incest and the use of objects; and economic or financial abuse, which also includes a range of controlling behaviours such as restriction of women's access to economic resources.

There are also a number of cultural practices in the Pacific which subjugate women's rights. For example, forced marriage is not uncommon in some countries after rape, and it is also used as compensation payment for a rape or other transgressions between family groups. The payment of bride price is often used as a justification for violence and abuse and is seen as conferring the right to "discipline" women in many parts of Melanesia. There are reports of killings as a result of accusations of sorcery in both Papua New Guinea and Vanuatu, and gang rape is prevalent in Papua New Guinea and Fiji. Violence against sex workers, women living with HIV/AIDS and women with disabilities has been reported to the FWCC from across the region by network members. Sexual harassment and abuse within the workplace and community are also prevalent.

Research in the Pacific

While there are no reliable data on the trafficking of women and girls, there are indications that this is an emerging issue in Fiji and other countries of the region. Anecdotal evidence suggests that some women have been trafficked into Fiji from China and some media reports confirm that this has occurred in Papua New Guinea.^b There are confirmed cases of trafficking of children in Fiji, Solomon Islands and Papua New Guinea, although in some cases trafficking and commercial sexual exploitation do not cross borders. In Solomon Islands and Fiji there are confirmed cases of children being trafficked using fishing boats or yachts. In Fiji, a number of children, including street children, have gone missing and trafficking has been suspected but not confirmed.

The FWCC's 1999 national research on domestic violence and sexual assault found that 66% of the women surveyed reported that they had been abused by their partners. Of these, 30% suffered repeated physical abuse, 44% reported being hit while pregnant and 13% reported that they had been raped. The survey also found that 74% of female victims did not report violence to the police or seek medical attention. Sexual assault and harassment were found to be prevalent across all age groups, but the largest group of victims was the 11–15 year olds. Of the perpetrators, 74% were known to the victim, and over 30% were relatives of the victim.^c

The Samoa study found that 37% of the women surveyed had experienced physical partner violence and the Solomon Island study found that 64% of the women surveyed had experienced physical and/or sexual partner violence.

AusAID's ODE report highlights the importance of conducting more quantitative research on the incidence, prevalence and forms of violence in the Pacific.^d The Samoa and Solomon Islands surveys used the WHO methodology and the Kiribati study, which used a similar methodology, has been finalised. The FWCC is looking at working on a similar study in Fiji.

Violence against women is a human rights and development issue—causes, contributing factors and consequences

The FWCC's analysis of the causes and effects of violence against women (VAW) and its contributing factors is based on sound social and gender analysis, extensive experience over 24 years, and a commitment to the human rights of all people. This analysis is supported by international analysis and research by authorities such as UNIFEM, the UN Special Rapporteur on Violence against Women and the United Nations' Secretary-General's report on VAW.^e

Violence against women is caused by inequality between women and men: specifically, unequal power relations. This imbalance in gender power relations is long-standing, historical and embedded in key social institutions such as the family, the Church, traditional culture and custom, the economy, the law, the education system, the media and the political system. Most cultures accept and promote the subordination of women, in some way or to some degree, through stereotyped gender roles, beliefs and practices that reinforce notions of male ownership of women, practices that encourage control over female sexuality, and attitudes that value men's work more than women's.^f In addition, some traditional and religious values and beliefs have been misunderstood or misinterpreted to condone violence as a legitimate form of punishment or discipline for both women and children.

Underlying this systematic and institutionalised gender-based discrimination is a lack of understanding, knowledge and belief in the human rights of all people, which also contributes to an acceptance of violence generally in society as a way of resolving conflict. This reinforces and supports militarisation and beliefs about masculinity that are wedded to wielding power and control over women. AusAID's ODE report on VAW has highlighted the critical importance of using a human rights framework for all interventions.^g Within the Pacific region, the FWCC has pioneered this approach, which recognises that VAW is "both a means by which women's subordination is perpetuated and a consequence of their subordination".^h

A WHO report on violence and healthⁱ concluded that a wide range of studies from both industrialised and developing countries produced a consistent list of events which "trigger" violence. These triggers are overwhelmingly expressions of unequal power relations and the expectation that women should be subservient to men. The FWCC's research on domestic violence found a very similar list of triggers, including: disobedience, cheekiness/arguing back, refusal to have sex, not doing chores, socialising, and suspicion that the woman has committed adultery.^j These triggers are also extensively used by people in positions of authority to justify or condone VAW.

A range of risk factors that increases women's vulnerability to violence has also been identified in the AusAID ODE report and in previous work by WHO. Many of these factors, particularly at the family, community and social levels, are also rooted in a lack of internalisation of human rights principles and unequal gender power relations.^k

Other social and institutional factors which contribute to or perpetuate VAW include:

- inadequate responses by law and justice agencies and the failure of government to address the problem systematically at all levels, including lack of trained personnel and impunity for intimidation, harassment and crimes of violence committed by the police and military
- lack of support by families and social institutions for survivors and inappropriate responses to the problem by other service-providers, which further traumatises women and perpetuates violence against them
- traditional myths and beliefs that blame women for violence and thereby perpetuate violence
- men not taking responsibility for their violence, which is reinforced by the family, social institutions and service-providers in various ways
- portrayal of women in the media, which reinforces traditional roles of women and perpetuates myths about violence against women and children.

The FWCC believes that cultural and religious fundamentalism is on the rise in Fiji and in the Pacific. This promotes and reinforces conservative ideas and myths about women and their rights. Many chiefs are reinforcing the traditional role of women as primary caregivers and homemakers. The assertion of rights by women is often blamed for family breakdowns, sexual abuse within the family and also for violence against women. Sexual assault and violence against women is condoned, reporting of violence is discouraged and women are counselled by many religious leaders that it is a sin to divorce or separate.

The consequences of VAW are far-reaching and major barriers to development and poverty reduction throughout the Pacific.^l VAW is a serious impediment to the participation of women in all aspects of development in Fiji and the Pacific region. Violence and the fear or the threat of violence pervade all spheres of social, economic and political life. They prevent women from taking educational and employment opportunities, being involved in public life and decision-making, achieving equality, and gaining their basic human rights.

There are substantial human resource costs associated with women being unable to participate fully in society, development and nation-building. Violence against women and children also incurs significant direct, indirect

and opportunity costs to government, families and the community. In 2002, the Governor of the Reserve Bank of Fiji estimated that direct and indirect costs in Fiji amounted to around \$300 million per year, which was equivalent to 7% of the gross domestic product.^m The government incurs health care costs, court and law enforcement costs, and welfare payments; families suffer loss of earnings, and legal and medical costs; children's education often suffers; and employers experience a loss of productivity and output when women are absent due to violence. All these costs affect the wider community and, at the macro level, the whole nation.

Violence against women has profound mental, physical and reproductive health effects. Women subjected to violence suffer from low self-confidence, low self-esteem and have increased risk of depression, anxiety and suicide. These mental health factors also contribute to poor physical health generally, in addition to a range of physical injuries with both short-term and long-term chronic effects. International studies confirm the FWCC's research findings that many women are abused during pregnancy, with serious consequences for the mother and foetus, including miscarriage.ⁿ Violence against women can result in unintended pregnancies, repeated childbearing, gynaecological disorders, unsafe abortion and pelvic inflammatory disease. And in some cases, the violence ends only with the woman's life. Children who are present in violent situations are at a higher risk of repeating the cycle of violence, in addition to the direct physical and mental anguish they suffer.

The links between VAW and HIV are two-way and well-established^o—VAW leads directly to HIV infection and other sexually transmitted infections, and women's HIV-positive status also increases their vulnerability to further violence and discrimination from the family, the community and service-providers.

Poverty, gender inequality and violence against women

Poverty, both rural and urban, is on the increase throughout the Pacific and there is now consensus that it is a serious problem affecting access to basic needs, health care and shelter.^p Women and their dependent children are frequently the worst affected with significant gender gaps in income and access to formal employment.^q

In Fiji, for example, the majority of the recipients of Social Welfare's Family Assistance Scheme are female (around 71%).^r A study of gender issues and employment in Fiji by Professor Wadan Narsey found a huge gender gap in female labour force participation rates, with 37% of women aged between 15 and 64 years in the labour force compared with 81% of men in the same age group. This gap is even wider in rural areas and for Indo-Fijian women aged over 25 years. Despite doing 52% of all the work in the economy, women received only 27% of the total income in the country. Of workers in the labour force living in poverty, 44% were female while 32% were men; and the gender gap was even higher for workers in the non-formal sector.^s

Despite changes in patterns of economic development in many countries across the Pacific, women are still over-represented in lower-income jobs, the service sector, the informal sector and the subsistence economy. Women are severely disadvantaged economically, whether they live in rural areas or urban settlements throughout the region. Many women have little control over the cash gained from their labour, and women are more likely to be unemployed than men.

While VAW affects women from across all socio-economic groups, there is a correlation between poverty and VAW. This relationship is multi-dimensional. AusAID's ODE report cites poverty as one of a number of factors at the family level that may increase women's vulnerability to violence.^t Financial stress can be a trigger for violence. The FWCC's experience throughout the region indicates that poverty and women's lack of economic independence are key factors that prevent women from leaving a violent relationship, whether or not welfare systems are in place. Other factors are social, cultural and legal factors, including the stigma associated with divorce and separation. This is particularly true where bride price and strong customary and religious constraints prevent women from taking action to end violence and claim their rights.

It is very clear that violence against women and children contributes to poverty both directly and indirectly, and that poverty reduction efforts are seriously hampered as long as VAW is tolerated. About 60% of the FWCC's clients do not have formal employment. As noted above, women are under-represented in formal employment in most Pacific countries due to discrimination and poor educational status, as well as a shortage of jobs in rural economies, so it is likely that the employment profile of women subjected to violence in Fiji is similar throughout the region.

There are many cases of VAW that result in separation or divorce. In countries where welfare payments are not available, women and children are dependent on irregular family or child maintenance payments (because of a failure to implement maintenance laws by the judiciary and police) or on the generosity of relatives, who frequently do not support women in their decision to leave a violent partner. This applies across the region, whether or not separation requires the repayment of bride price. Where government or non-government welfare systems are in place, welfare support is inadequate.

Many clients seen by the FWCC feel they are unable to leave their relationships because of their children, as they are fully dependent on their husbands for financial support. If a client leaves, maintenance payments alone by the partner will not be enough to support the basic needs of the woman and the children due to the high cost of living. Some children become street kids as a means of escaping the violence and poverty in their homes.

Violence results in physical injury and mental disability, which undermine women's ability to find work and can result in women losing their jobs due to frequent absences and poor job performance. Women who have made the difficult decision to leave a violent partner are amongst some of the poorest in the community. They are often unable to provide for their children's education, which reinforces a cycle of poverty and vulnerability. Prostitution is a last resort for destitute women, and street children who have suffered physical or emotional abuse in the family.

Conflict, emergencies, gender inequality and violence against women

Poverty is exacerbated throughout the region by the problems of climate change, natural disasters and rapid urbanisation, which is often associated with an increase in serious crime. Several countries in the Pacific have recently experienced or are at risk of political, ethnic and tribal conflict and political instability, including Fiji, Papua New Guinea, Solomon Islands, Vanuatu and Tonga. Four political coups in twenty years have caused serious disruptions to social and economic life in Fiji. Civil society organisations (CSOs), such as the FWCC and other women's organisations in the region, have played a key role in supporting a return to the rule of law, and in promoting transparency and accountability in government agencies in times of political instability and conflict.

The most immediate and direct impact of political, ethnic and tribal conflict on women and girls is an increase in all types of violence against them, including physical, sexual, emotional and economic violence and abuse. These impacts have been extensively documented internationally in relation to the passing of United Nations Security Council Resolution 1325 on women, peace and security.^u There is also considerable anecdotal evidence of sexual and other forms of violence against women in Pacific countries during conflict that has been passed on to the FWCC by regional network members. Some of this evidence has been documented in the AusAID ODE report on VAW for Solomon Islands, Papua New Guinea and Fiji, in addition to increases in VAW in the context of natural disasters and emergencies.^v

There is also a range of indirect impacts of conflict on the amount of attention given to VAW. In the context of political and ethnic tension and violence and serious crime problems, issues concerning women and their rights become secondary to issues of national security and the maintenance of law and order, despite the fact that women are disproportionately affected by conflict and violence and are often targeted for further violence by their intimate partners, by combatants, and by representatives of the state, including the military and the police. CSOs, including women's groups, have to work much harder to highlight human rights and gender equality issues and to have them taken seriously by governments, the media and community leaders.

After the 2000 coup in Fiji, women faced significant economic difficulties. According to FWCC research, of those women surveyed who were in paid employment, 72% either lost their jobs or had reduced working hours and pay cuts as a result of the coup.^w Following the December 2006 coup, economic hardship increased again. Costs rose on basic food items such as flour and rice, and people experienced further unemployment or shorter working hours. In this context, women and children were left even more vulnerable to violence. Similar economic impacts of conflict and political instability are felt throughout the region.

Other impacts of political instability and militarisation are a general deterioration in the provision of services such as health, social welfare and policing—due to scarce resources—and the prioritisation of other issues under military rule. Militarisation reinforces a “macho” culture and undermines progress already made in the community towards a reduction in tolerance for violence generally. Political instability, militarisation and the

undermining of the rule of law, including compromising the judiciary and an increase in human rights violations, all tend to further reinforce the use of violence as a way of resolving conflict. Following the 2006 Fiji coup, there was an increase in the number of incidents where the military and the police forced women to go back to their husbands, and there were also cases where husbands/partners threatened to report women to the military if they took action against violent men. There is anecdotal evidence of an increase in VAW perpetrated by the military and the police, who act with impunity and are immune from prosecution for all types of crimes of violence. All these factors undermine reporting of VAW and women's access to justice. Human rights defenders, including FWCC counselors, are subjected to harassment. When women do report, the justice system takes a very long time to take its course—up to four years in some cases.

Conclusion

Violence against women is a serious developmental issue. For the Pacific region, the cumulative work over the years by organisations throughout the Pacific have led to some key achievements and milestones including law reform, increased programming, greater awareness, recognition of the issue of violence as a violation of women's human rights, as well as the increased involvement of men in these efforts. However, despite our continuing efforts in our respective communities, violence against women and children continues to be a major problem in our countries. There are also new, emerging challenges, such as the lack of recognition of the vulnerabilities of women with disabilities and the trafficking of women and girls. Unless governments in the Pacific region take up the issue using a sound gender and human rights approach, we will continue to be confronted by a problem that, while deeply rooted in patriarchal values and practices, permeates to all levels within the community.

Notes

- a AusAID Office of Development Effectiveness 2008: 8-14; Lievore and Fairbairn-Dunlop 2007a, 2007b and 2007c; and Fairbairn-Dunlop and Lievore 2007; and Vanuatu Women's Centre 2007.
- b *Fiji Times* 17 December 2008: 19.
- c FWCC 2001: ii-iv.
- d AusAID Office of Development Effectiveness 2008: xi, 8, 28-29.
- e United Nations 2006.
- f United Nations 2002.
- g AusAID Office of Development Effectiveness 2008: 21-28.
- h United Nations 2006: paragraph 72.
- i WHO 2002 World Report on Violence and Health WHO, Geneva: 95.
- j Fiji Women's Crisis Centre 2001: 27,32-33.
- k AusAID Office of Development Effectiveness 2008: 5-6.
- l AusAID Office of Development Effectiveness 2008.
- m Savenaca Narube 2002: 13.
- n WHO 2002: 101.
- o AusAID Office of Development Effectiveness 2008: 5.
- p AusAID 2006b: 29; AusAID ODE 2008: 106, 144, 152-153; and Schoeffel Meleisea: 4-5.
- q AusAID 2007: 6-7.
- r UNFPA Pacific Sub Regional Office 2008: 6-7.
- s Wadan Narsey 2007: 9-10, 17-19.
- t AusAID Office of Development Effectiveness 2008: 5.
- u For example, see United Nations Security Council 2004; and United Nations 2006.
- v AusAID Office of Development Effectiveness (ODE) 2008: 12, 19.
- w Fiji Women's Crisis Centre 2001: 4.

Legal aspects of violence against women in Pacific Island countries and territories

P. Imrana Jalal

Violence against women (VAW) is a significant long-term threat to the economic, social, cultural well-being and security of Pacific Island Countries and Territories (PICTs). It is both a cause and consequence of gender inequality (WHO 2005). It is a serious and widespread problem in the region, and a critical impediment to women being able to fully participate in development processes (UNESCAP 2007: 119).

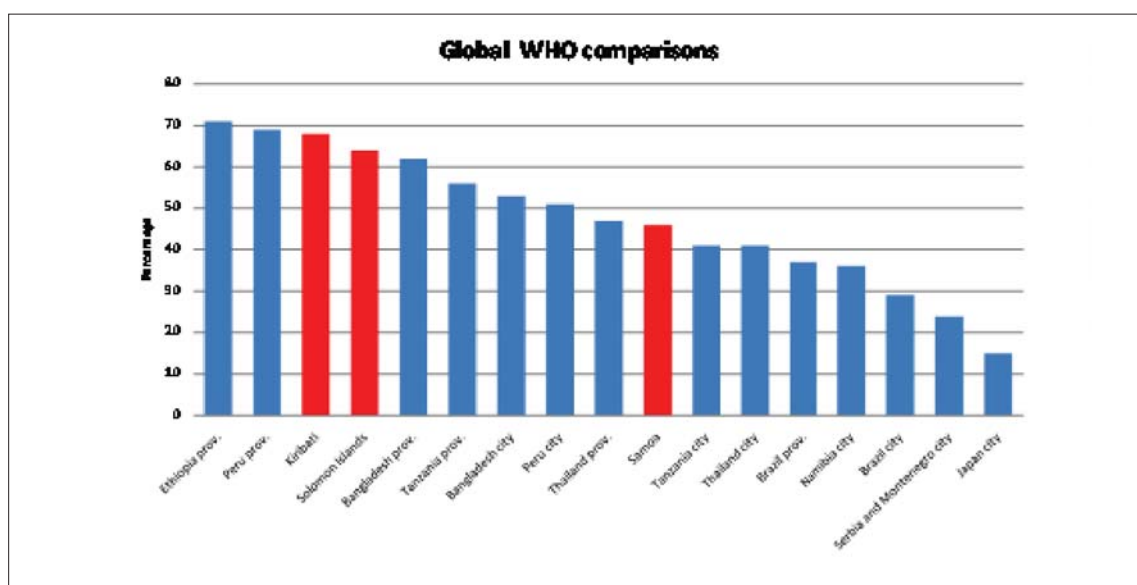
The current laws (legislation, common law or courts decisions and legal practices) in most PICTs are ineffective in securing gender justice for women. A legislative reform strategy is an important element in addressing the systemic, historical and structural problem of violence against women, although by no means is it the only strategy necessary. A combination of effective political, economic, cultural and social strategies is also necessary. The purpose of this paper is to provide a summary overview of the existing legislative framework, common law and legal practices on violence against women in the Pacific, and to highlight the value and benefits of an integrated and comprehensive approach to passing legislation on violence against women.

The 40th Pacific Island Forum Leaders meeting in Cairns in August 2009 recognised sexual and gender-based violence (SGBV)^a as pervasive and under-reported, and that several measures were needed, including legal measures, to address the problem. This was a pivotal moment in regional policy, and a significant milestone for the advancement of women in PICTs.

In the Pacific region, country studies on VAW have been conducted using a standard global methodology in three Pacific Island countries, Solomon Islands, Kiribati and Samoa. The incidence of VAW demonstrated in the study, is alarming. Of the 17 countries in the global survey, two Pacific Island countries had rates that were among the highest in the world (Figure 1).

Figure 1 shows the comparison amongst countries in the *WHO Multi-country Study on Women's Health and Domestic Violence Against Women*.^b

Figure 1 Experience of physical and/or sexual violence of women aged 15–49 years



Harmful practices against women

Harmful practices against women are also some of the ways in which violence is used to enforce sexual norms and gender roles on women by state and non-state actors, including the family and the community (Jalal 2009a). These harmful practices are often considered part of customary law, and therefore have the sanction and authority of the law. Some forms of harmful practices, both traditional and contemporary (modified versions of traditional practices), do occur with impunity in some PICTs. These include *brideprice* practices (Melanesia

and East Timor), traditional forgiveness practices, the burning of mainly female witches for alleged sorcery (Melanesia) and early or arranged or forced marriages. There is also evidence of *payback* or punishment rape (Melanesia), forced marriage to one's rapist, forced marriage as part of dispute settlements (Melanesia), polygamy (Melanesia), imprisonment for adultery (Papua New Guinea) and the maltreatment of widows (Melanesia and Tonga). Dry sexual intercourse (Kiribati), virginity tests and burning or scarring of brides also highlight the fact that prevailing forms of violence are often either overtly sexual in nature or are related to women's sexuality and have detrimental mental, physical and reproductive health effects on women (Jalal 2009a).

Many harmful practices against women are regarded as customary law practices and therefore not challengeable on this basis. Customary law is recognised in most PICT constitutions. The language of recognition is generalized and non-specific, allowing for a wide variety of interpretations. With some exceptions, the interpretations work against women's human rights.

The discriminatory invoking of culture and custom is often used to justify the violent treatment of women. However, the "customs" and "traditions" that are invoked are often hazy manifestations of the original, which have been distorted to suit community or family convenience. For example, in Papua New Guinea, some fathers have used the "tradition" of *brideprice* to justify trading their daughters for cash or goods from transient logging and mining workers. Yet the same family and community will often overlook other traditions and expectations associated with the *brideprice* custom. Some Papua New Guinea communities which did not practice the *brideprice* tradition in the past have adopted the practice as a way of demanding cash for the marriage of a daughter (Ali 2006:7–13 cited in Jalal 2009).

The Pacific Island region is rich in cultural heritage and diversity, and there are marked differences between the sub-regions of Melanesia, Polynesia and Micronesia. However, throughout the region, Pacific women cite customary practices and attitudes as putting women at risk of violence and making it difficult or even impossible for them to protect themselves against it.

Those countries which do not modify all discriminatory custom laws and harmful practices against women have failed to meet their obligations under Article 5 of CEDAW. This requires state parties to modify the social and cultural patterns of conduct of men and women which are based on the idea of the inferiority of either sex. One legal policy option for partially achieving this is to amend those PICT constitutions which recognise custom law, so that they all contain a specific provision stating that where there is a conflict between women's rights to equality and custom, the former should prevail. In this way, harmful practices against women can be specifically challenged. For example the draft proposed by Solomon Islands women's non-government organisations (NGO) to the proposed Solomon Island Draft Constitution would rule out any ambiguity.

"Where there is a conflict between customary laws or practices and women's right to equality under this Constitution or any other law, women's right to equality shall prevail."

The overall legislative framework on VAW under domestic and international law

For the most part, the laws are archaic and ineffective in securing justice for women. Compared to many other regions of the world, there has been a want of legislative reform in the Pacific region (Jalal 2008). With the exceptions of Vanuatu, in stand-alone domestic violence legislation, and Papua New Guinea and Marshall Islands to a certain extent in sexual assault legislation, reforms have been piecemeal changes to existing criminal and civil legislation, or common law precedents and legal practices, and have only band-aid therapy. The ineffectiveness of the piecemeal approach underscores the importance of a comprehensive, integrated approach to dealing with VAW.

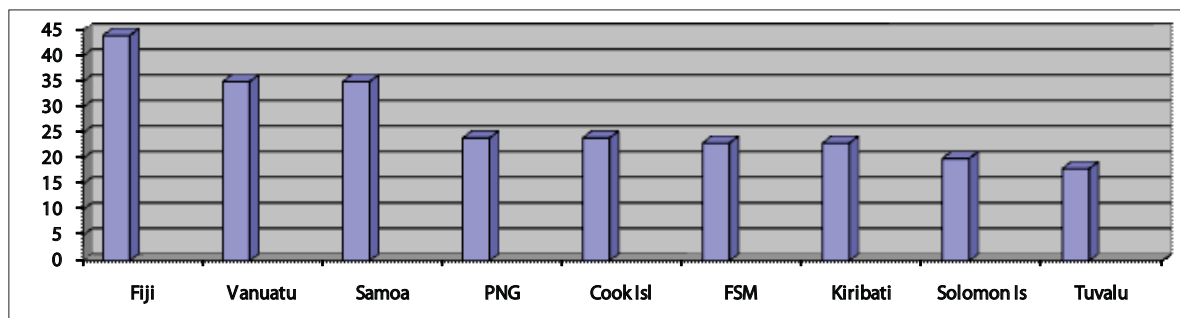
In 2003 and 2005 respectively, Papua New Guinea and Marshall Islands changed their sexual assault regimes, attempting to remove legal discrimination against women in sexual offence law and practice.^c In Fiji, the innovative Family Law Act 2003 was implemented at the beginning of 2006 and provides a civil protection order for women. In November 2008, Vanuatu passed the Family Protection Act 2008, making it the first country in the region to have targeted stand-alone domestic violence legislation covering both criminal and civil aspects of VAW. Systematic research will be required within three years to assess the effectiveness of new legislation.

States that are parties to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)—all PICTs except Tonga, Nauru and Palau—are required by Article 2(f) to take all appropriate

measures, including legislation, to modify or abolish existing laws, regulations, customs and practices that constitute discrimination against women.

Fiji, Papua New Guinea and Vanuatu have had the most success in passing new legislation in compliance with CEDAW. In terms of approximate formal legislative compliance with CEDAW, Fiji has the highest compliance rate at 44%; Vanuatu, 35%; Samoa, 35%; Marshall Islands, 34%; Papua New Guinea 24%; Cook Islands 24%; FSM, 23% federal compliance (State compliance is higher—Yap 25%; Kosrae 29%; Chuuk 29%; and Pohnpei 31%); Kiribati 23%; Solomon Island 20%;^d and Tuvalu has the lowest at 18% (Figure 2). No PICT is more than 50% compliant. Fiji and Vanuatu improved their overall compliance, from being amongst the lowest ranked to amongst the highest with the passing of the Family Law Act 2003 in Fiji and the Family Protection Act 2008 in Vanuatu. Until 2003, Samoa was ranked the highest but Samoa has made no significant changes in legislation, despite being the first PICT to ratify CEDAW (Jalal 2009b). Solomon Islands will also improve its ranking, once the recent (July 2009) changes to the sexual assault legislation come into effect. These changes partially removed discrimination against women in sexual assault laws.

Figure 2 CEDAW Legislative Compliance



Note: these data are **only** in relation to formal legislation (*de jure* compliance) and does not cover compliance in common law or customary law, nor the *de facto* or real legal status of women on the ground.)

So far, most countries in the region are in *de jure* and *de facto* breach of Article 2(f). In addition, states that have signed the Convention on the Rights of the Child have an obligation to protect children against abuse of all kinds.

Sexual assault and rape

Most sexual assault laws in PICs are based on myths about women's sexuality. These include defining rape as limited to penile/vagina rape and not including assault with other objects (rape with other objects constitutes 'indecent assaults' subject to lesser penalties); not allowing prosecutions for marital rape; defining consent from the view of the offender rather than the female complainant; permitting the discriminatory corroboration warning; and allowing the complainant's past consensual sexual experience to be admitted as evidence against her credibility.

Marshall Islands,^g Papua New Guinea, FSM (and, recently, Vanuatu^h) have broadened the definition of sexual assault to include rape by other objects,ⁱ but the narrow definition remains in most other countries. This means that sexual assault with bottles or other objects is not prosecutable as such.

Common to most PICTs, except RMI, is the legal practice or convention of the requirement of physical 'proof of resistance' which requires complainants to prove that they fought their assailants to escape, in order to be believed that they were raped. Judges who have undergone gender and human rights training no longer require such evidence, highlighting the importance of such training in the way women experience justice in the courts.

Many countries still allow the highly discriminatory corroboration common law practice in relation to the evidence of the complainant, in which the court gives a warning to itself or a jury that it is dangerous to convict on the independent uncorroborated evidence of the victim. The corroboration warning, based on a belief that women lie about rape habitually, is the worst of all practices. The rule is still practised in Vanuatu, FSM (all states) and other PICTs. It has been removed by legislation in Marshall Islands, Papua New Guinea, Kiribati, Cook Islands (UNIFEM Pacific 2006) and a few months ago in Solomon Islands; and by common law in Tonga^k and Fiji (Box 1)^l. Changing such practices through the common law makes the change vulnerable to judicial interpretation.

Box 1 The landmark sexual assault case that outlawed the gender discriminatory corroboration rule - *Balelala v State*, Criminal Appeal No. AAU0003 OF 2004S, 2004

In 2002, the accused (B) held prisoner and raped the complainant (C), three times at a popular nature reserve. B was found guilty but corroboration of the evidence was a point of discussion. The case went all the way to Fiji's highest court on appeal, the Supreme Court. B argued it was dangerous to convict him on C's evidence alone as per the corroboration warning and his conviction should be overturned. In a groundbreaking precedent, the court removed the corroboration practice ('the rule') after examining the legal basis of it, the rationale behind the rule, the laws of Fiji and other jurisdictions on the rule. The court found that the rule discriminated against women who were the main victims of sexual violence, and that it was a violation of the non-discrimination provision, Article 38(1), of the Constitution. Under Article 43(2) also, the court was required to interpret the provisions of the Bill of Rights 'to promote the values that underlie a democratic society based on freedom and equality and must, if relevant, have regard to public international law applicable to the rights set out in the Bill of Rights'. CEDAW was then cited as prohibiting any form of discrimination against women. The removal of the rule placed C's evidence in sexual offences on the same basis as the evidence of victims in other cases of criminality. However, the court advised that legislation might be necessary to put any residual question to rest.

Comment. The training of lawyers and judges is critical in bringing about changes in the law. In this case, the attitudinal changes of the prosecutors and judges were apparent. Women's NGOs in Fiji have been vigilant in reminding the judiciary that it has to comply with equality principles in the Constitution of Fiji and CEDAW.

The admission of the rape survivor's past sexual history with other men can affect her credibility to the extent that she is not believed, the prosecution does not succeed and the rapist is acquitted. If he is sentenced, her past sexual history may reduce the severity of the sentence. PNG and the Cook Islands have changed the credibility practice, not allowing the admission of the survivor's past sexual history through legislation, whilst FSM and Solomon Islands have only partially addressed this, still leaving it to the discretion of the court.¹ Tonga and Fiji have also partially addressed the practice through landmark court cases and new precedents. Table 1 provides a snapshot of the situation in other PICTs.

Table 1 Pacific Island country evidence laws on rape and sexual assault – some examples of non-legislative discrimination in common law practices^m

	Permits gender discriminatory corroboration warning in sexual assault cases; has not removed the practice by legislation.	Permits questioning of the complainant's past sexual history with men other than the defendant during court case; has not removed the discrimination by legislation.
	Yes indicates gender discrimination.	Yes indicates gender discrimination.
Fiji	Partial – only through court precedent not legislation	Yes
PNG	No	No
RMI	No	Partial
Vanuatu	Yes	Yes
Solomon Islands	No	No
Tonga	Yes ⁿ	Yes
Nauru	Yes	Yes
Cook Islands	No	No
Kiribati	Partial	Partial
Samoa	Yes	Yes
Tuvalu	Yes	Yes
FSM	Yes	Partial (all states except Pohnpei)
Niue & Tokelau	No	No

Source. Jalal, P I. 2009b, Gender equity in justice systems of the Pacific Island Countries & Territories: Implications for Human Development, Technical Background Paper for the Asia-Pacific Human Development Report on Gender 'Addressing Unequal Power and Voice', 29 March 2009. This table has been updated since March 2009.

Most PICTs do not have specific laws covering prosecutions for marital rape, with the result that most rapes within marriage or after separation are not prosecuted. A few countries allow for prosecutions in limited circumstances. Cook Islands, Niue, Tonga and Samoa have legislation stating that marital rape is illegal only if the parties are separated, divorced or where ‘consent has been withdrawn through the process of law’.^o Papua New Guinea has removed the marital immunity in its legislation that had previously prevented husbands from being prosecuted for rape.^p The states of Chuuk and Kosrae in FSM also permit the prosecution of husbands, at least on paper (UNIFEM Pacific 2007: 83, 145).

In 2003, with the introduction of the Criminal Code (Sexual Offences and Crimes against Children) Act 2002 Papua New Guinea changed its sexual assault regime. A number of new offences were introduced, extending penetration to all orifices by the penis or any other object. The offences were graded according to the gravity of the harm, and integrate the many ways in which women are sexually violated. Harsher sentences were introduced, the marital immunity that had previously prevented husbands from being prosecuted for a charge of rape was removed, and the common law practice of requiring corroboration as evidence was abolished (UNIFEM Pacific 2007:266). The new legislation did remove the admission of the prior sexual history of a victim but did not legislate against the requirement for proof of resistance by the victim. It also allows victims of sexual and domestic violence to claim compensation from the perpetrator.^q

Most attempts to change sexual assault laws through comprehensive dedicated legislation have so far failed. For example, rape law draft legislation^r in Fiji has been thwarted for a variety of reasons, including disputes about the substance of the draft law; that it favoured the victim over rights of due process of the accused, and the perception that the draft was too ‘western’, feminist, radical and clashed with so-called Pacific culture. Added to this, Fiji has experienced three military coups d’état in 20 odd years, thus interrupting the rule of law and reducing the space for legal reform. Other PICTs show similar recalcitrance in passing new laws.

The most recent law reform initiative addressing VAW has been the passing of the Evidence Act 2009 in Solomon Islands. The Act removed three discriminatory legal practices and introduced a new law designed to protect vulnerable witnesses from being directly cross-examined by their assailants. It abolished the gender discriminatory corroboration practice, removed the practice of allowing the past sexual history of the complainant to be admissible in court, and set in place a new regime which denies the defence the opportunity to draw adverse inferences from the complainant’s delay in reporting her sexual assault. Although important and advanced standards were set in two changes regarding evidence, the new provisions fall somewhat short of international good practice by still allowing judicial discretion in an area of law which is prone to gender stereotyping in interpretation. Nevertheless, these are major advances and are to be seen as interim measures until better, more comprehensive and integrated laws are passed.

Domestic violence

The implications of not protecting women against domestic violence are considerable and include significant economic costs. The Reserve Bank of Fiji has estimated that violence against women costs the Fijian economy close to FJD300 million a year, 7% of the GDP (Nairube 2002). There are overarching implications for women’s empowerment and productivity in the workplace and home. The key role of the mother in household matters, particularly in children’s health and education – means that her physical and mental protection, education and hopes can shape a family and home (UNESCAP 2007). Gender discriminatory laws reinforce women’s disadvantages in all other sectors.

No PICT has yet passed comprehensive, integrated VAW legislation covering multiple forms of violence against women, consistent with substantive equality standards. Only Vanuatu has come close to good practice by passing brand new stand-alone or separate domestic violence legislation, which attempts to encompass all criminal and civil elements of domestic violence in one piece of legislation. Apart from Vanuatu, no PICT has criminalised domestic violence as a specific crime and it is generally not considered a gender-based crime in most of the Pacific Islands (Box 2). However, in all other PICTs a domestic assault is prosecuted under general assault laws, giving domestic violence no special status, nor treatment, by justice agencies. This makes prosecution difficult and lumps domestic violence into the same category as brawls outside the nightclub and assaults between men. Nor does it recognise the gendered nature of domestic violence and the lack of a level playing field between men and women in economic and social spheres. Some countries have set up VAW units to attempt to change this perspective.

Box 2 The Family Protection Act 2008, Vanuatu—combating criminal assault in the home (Jalal 2009a)

In 2008, the Vanuatu Parliament passed the Family Protection Act 2008 a result of more than 10 years of intense lobbying and campaigning by the Vanuatu Women's Centre (VWC), Vanuatu National Council of Women (VNCW) and other women's NGOs. The new law is designed to combat domestic violence and to provide for enforceable protection orders. Although by no means perfect legislation, it is a major advancement in women's rights in Vanuatu in the area of domestic violence, as it covers both criminal and civil aspects of VAW.

The legislation's main features are:

1. It makes domestic violence both a criminal offence punishable by imprisonment; and a civil offence attracting protection orders.
2. All forms of marriage are implicitly recognised so that any person in a domestic relationship of some sort is entitled to a protection order, thus implicitly including a *de facto* spouse and a custom marriage.
3. One of its innovative features, designed to deal with the remoteness of populations living in the outer islands far away from courts, is the authority given to trained 'authorised persons' in remote villages to give special temporary protection orders to women who are being beaten.
4. It is illegal to use culture, custom or the payment of bride price as a defence to a prosecution.
5. Given the remoteness of Vanuatu's populations from urban centres it allows for court orders to be obtained by telephone or fax.
6. It removes various legal impediments which prevent successful prosecution. The Police have extensive powers and can arrest without a warrant. They can investigate an offence and charge on the basis of a specific domestic violence offence. The Police are required to bring an arrested person to court within 48 hours of arrest.

Justice agencies widely encourage forgiveness and reconciliation, both in the informal or village courts, or the national level courts which administer formal law. The effect of this is that there is either no prosecution, finding of guilt and punishment deserving of the crime; or the act of forgiveness is used to lessen the punishment.

Box 3 Customary practices, bride price and domestic violence in Melanesia

Among the most frequent explanations women put forward for the violence and discrimination they suffer at the hands of their husbands in Solomon Islands is the tradition of a 'bride price' given to the parents of a bride at her wedding by the parents of the groom. While customs on bride price vary according to provinces and language groups, the practice encourages an attitude in husbands to treat wives like property: 'As a wife, she is expected to be subordinate to and obey her husband ... She is at the mercy of her husband, who paid bride price for her...' Some Malaitan men confirmed this perception and added that a young husband was under pressure from the male community and his relatives to show his ability to 'control' his often teenage wife, including through violence (Amnesty International 2006).

Many customary practices are still in place and reinforce certain interpretations of religious (mainly Christian) beliefs about women's roles. In Melanesian countries, apart from Fiji, bride price is still used to justify binding women in violent marriages. Where polygamy is practised and accepted, violence against women is particularly prevalent. In Papua New Guinea, there is a high level of violence against women by their husbands and also between co-wives. During a visit to a state prison in the highlands of Papua New Guinea, Fiji Women's Crisis Centre staff found that, of 24 women imprisoned, 16 were imprisoned for murder of their co-wives or their husbands. Some local women's NGOs report that approximately 85% of the cases they attend to are polygamy related (Fiji Women's Crisis Centre 2008).

No PICT has specifically legislated against the forgiveness ceremonies having any influence on criminal proceedings. However, Vanuatu's new Family Protection Act 2008 states that the payment of bride price has no bearing on guilt or punishment in domestic violence cases.

10. (1) A person who commits an act of domestic violence is guilty of an offence punishable on conviction by a term of imprisonment not exceeding 5 years or a fine not exceeding 100,000Vatu, or both.

It is not a defence to an offence under subsection (1) that the defendant has paid an amount of money or given other valuable consideration in relation to his or her custom marriage to the complainant.

With some notable exceptions there is a general unwillingness in the Pacific region to exercise powers of arrest, to lay charges and to follow through with criminal prosecutions. As domestic violence is considered a minor criminal assault, prosecutions are generally conducted by untrained non-lawyer police prosecutors in the lower courts. This decreases the likelihood of securing criminal convictions. There has been some anecdotal evidence to suggest improvements to rates of prosecutions in PICTs where police and prosecution offices have introduced 'No Drop' policies of prosecution, regardless of the view of the forgiving wife/partner. This means that the police are not permitted to drop the prosecution of the offender, even if the spouse is unwilling to pursue a prosecution after first having laid criminal charges. However, these are policy decisions, which cannot be enforced by the courts as they are internal organisational policy. Such policies can be enforced by internal disciplinary measures only. The policies require police to follow through with prosecution, following incidents of domestic violence, without any discretion being exercised. These policies have been applied inconsistently, depending on the commitment of the police commissioners.

Non-molestation and protective orders or injunctions are generally available through the common law as a rule of practice in some PICTs (Table 2). The new Vanuatu Family Protection Act has comprehensive provisions for protection orders. However, there is generally no legislative basis for providing such protection elsewhere. The courts exercise their discretionary power to make the order sparingly and inconsistently. Only married women, and not *de facto* wives or girlfriends, are entitled to seek the order. When the orders are granted and disobeyed, the police habitually do not enforce the orders through imprisonment, partly because the orders are vague, and also because there is no legislation setting out clear guidelines. Imprisonment requires lengthy and complex contempt of court proceedings, and domestic violence is not high on the police list of priorities. The perpetrator is usually summoned to the police station or court, 'reprimanded' and allowed to leave. There is no specific protection order by legislation in Samoa but the Divorce and Matrimonial Causes Act 1961 section 20 makes it a criminal offence to molest a wife after divorce. The Samoan draft legislation intends to provide for protection orders on a more comprehensive basis.

Table 2 Pacific Island countries that have specific legislation enabling the granting of protection orders for married women

Fiji	Yes, Family Law Act 2003, section 202.
Solomon Islands	Yes, Amendment Act 13/1992 of the Affiliation, Separation and Maintenance Act, 1971.
Vanuatu	Yes, Family Protection Act 2008, a variety of sections.
Cook Islands	Yes, the Cook Islands Amendment Act 1994, sections 523 G – K.

A considerable challenge is that, in most PICTs, courts rarely award custodial (prison) sentences that reflect the seriousness of the crime, despite the fact that domestic violence is a recidivist or repeated, habitual crime. In practice, the courts usually refuse to imprison a 'breadwinner', even when a further crime is committed. Crimes of theft or damaging of property regularly attract longer sentences. Courts routinely say that if they imprison a breadwinner there will be no one to financially support the family. Interestingly, the only time this justification is ever used is in domestic violence cases and not in mainstream criminal cases. If the breadwinner philosophy is to be applied in domestic violence crimes, then it should also apply to all crimes where a potential breadwinner is to be imprisoned. This would mean that more than half of all offenders would never go to prison. As a matter of policy, courts should order a 24-hour jail sentence to deal with the breadwinner argument or imprison at night or weekends only.

There have been some haphazard improvements to lengths of sentences for domestic violence offenders, but this is still dependent on individual judicial attitudes. The 'breadwinner' philosophy still largely prevails (Box 4).

Box 4 Domestic violence is not a private matter but not serious enough for a long prison sentence—*Toakarawa v The Republic of Kiribati*

T was a 22-year-old married man whose wife was four months pregnant. Whilst intoxicated, T beat her, dragged her by the hair and bit her on the nose, the cheek, the lips and the fingers of both hands. He resisted attempts by neighbours to intervene. The injuries were permanent and included the upper and lower lips being bitten off, exposing the teeth. T maintained that he was so intoxicated that he did not know what he was doing; that he had apologised for his actions and had later reconciled with his wife. The Chief Justice emphasised that domestic violence was not a private matter, that it was shameful, that it was to be severely punished and that it was a serious crime no matter who the victim, but that it was T's wife made it worse. The CJ noted, however, the apology, reconciliation, the state of drunkenness, the absence of previous convictions and the early plea of guilt. T was sentenced to three years' imprisonment. T challenged the sentence, arguing amongst other things that he needed to earn money for the family. An issue for consideration was whether the apology, the reconciliation and the fact that T was the main breadwinner, were relevant to sentencing in a domestic violence case. Was domestic violence a private or public matter? The Court of Appeal refused to lessen the sentence, saying that assaults on wives were to be treated as serious matters of public concern and that the extraordinary ferocity, the duration of the attack and the permanent disfigurement made the sentence appropriate.

Comment. Although this judgment demonstrates the positive changes in judicial thinking—for example, that reconciliation, apologies and the famous 'breadwinner' argument are not relevant issues to reduce sentencing—it still falls short of awarding a sentence adequately reflecting the seriousness of the offence. This is particularly so in a region where wife-beating is regarded as a customary 'right' of a husband. According to recent studies, Kiribati has the highest rate of VAW in the Pacific.

Samoa has drafted a Family Safety Bill which proposes to define domestic violence as a civil offence, impose legal duties upon police officer to prevent domestic violence and provide for a court to make victim protection orders. While this is a positive first step, the draft legislation falls short of comprehensively addressing domestic violence, nor does it address the structural and systemic discrimination faced by women.

Family Law and VAW

There are significant links between VAW and family law. Women are unable to leave their abusive husbands if the family laws do not provide sufficient and effective legal protection and support, in terms of custody and access of children and financial support. As a result, women remain in violent relationships, or they leave with their children, without economic support.

The family law in most PICTs is archaic and based on outdated colonial legislation. The legislation, common law and legal practices are discriminatory against women and they legitimate violence against them. Rigid concepts of women's roles within the family are the basis for how these laws have been devised. Divorce, in most cases, cannot be obtained without proving fault (including proof of habitual or persistent cruelty for a specified period over 2–3 years), and women's adultery is often held against them when they seek custody or contact with their children, maintenance and matrimonial property. In much of Melanesia, the payment of bride price by the husband's family to the wife's family is used to justify domestic violence, and to secure rights to custody of children. There are no equal rights to property after divorce through legislation, and distribution is generally based on the principle of financial contribution, thus disempowering the vast majority of Pacific Island women and greatly increasing their own and dependant children's likelihood of living in poverty.

In some cases, it has been more strategic to lobby for legislative protection against domestic violence in family law rather than criminal law. This was a deliberate action taken by the architects of the Fiji *Family Law Act (FLA)*. The underlying logic is that, because the burden of proof in establishing criminal guilt is much more difficult to establish (i.e. beyond reasonable doubt), by providing a legislative basis for it in the new family legislation, with its lesser civil law "balance of probabilities" burden of proof, courts are more likely to grant the protective injunction.

The new FLA is based on a no-fault principle of divorce. It utilises a non-adversarial counselling system and a specialist Family Division of the Court which prioritises children's needs and parental support. It removes all forms of formal legal discrimination against women and grants them rights to enforceable custody and financial support for them and their children. It legitimates and requires recognition and implementation of the major human rights United Nation conventions affecting family law, especially CEDAW and the CRC. Fiji, Cook Islands, Solomon Islands and Vanuatu each have a legislative basis for civil protective orders in their family law.¹

Conclusion

Changed, improved, enforceable laws, combined with adequate resources to properly resource and implement them, and gender and human rights training for law agency officials, can make an overall, critical difference to the lives of women (Box 5).

Box 5 Good practices in violence against women legislation

In May 2008, an Expert Group Meeting on *Good Practices in Legislation to Address Violence against Women*, was convened in Vienna by the United Nations Division for the Advancement of Women (UNDAW).^u It reviewed and analysed experiences, approaches and good practices in legislation on violence against women from around the globe, based on some 20 years of research and assessment of old, and relatively new VAW laws, and developed a model framework for legislation on violence against women. The *Good Practices* framework is based on laws from a variety of jurisdictions, not just from the British-based common law system. It is not a “one-size fits all” model, but encourages choices from a wide variety of options. It is a “menu” of good practices rather than one model legislation, based on the reality that legislation must also be context adaptable, whilst adhering to some fundamental and universal human rights standards.

The expert group emphasises the importance of adopting a comprehensive and integrated legislative approach, encompassing not only the criminalisation of all forms of violence against women, and the effective prosecution and punishment of perpetrators, but also the prevention of violence, and the empowerment, support and protection of complainants or survivors. It recommends^v that legislation explicitly recognise violence against women as a form of gender-based discrimination and a violation of women's human rights. This human rights based approach to VAW legislation is multi-disciplinary, covering the legal, health, education, social, economic and family law aspects of VAW, and it emphasises collaboration between police, social services and health care providers. It also suggests ways to address the root causes of VAW by shaping the education curricula. The legislation may take the form of a single piece of legislation, dealing with multiple forms of violence, or several pieces of legislation dealing with different forms of VAW, provided each is comprehensive and integrated. The new legislation should allow the same judge or magistrate dealing with the prosecution of a domestic violence case to make a number of relevant family law orders, so that women do not have to go to several different courts to obtain legal remedies.

The Regional Rights Resource Team RRRT has received funding under The UNIFEM Trust Fund in Support of Actions to Eliminate Violence against Women. The project under way is titled “Changing Laws, Protecting Women; lobbying for legislative change in violence against women / family law in order to enhance protective legislation for women and girls in six PICTs.” The overall vision is to improve legislation to protect women. The approach is to implement quality campaigns for VAW and family law reform. The project aims to build a cadre of skilled national level legislative supporters and advocates, specialising in VAW and Family Law legislation. Assistance will be provided through the provision of timely and individualised technical assistance in advocacy, lobbying and law reform. The project would work with established networks from community paralegals, members of parliament, lawyers, magistrates and civil society organisations (Houng Lee 2009).

Legislative reform is critical to achieve gender justice in the region.. The key policy and legislative changes needed (Jalal 2009b) are shown in Box 6.

Box 6 Key legislative and legal policy changes recommended^w

Criminal Law/ Violence Against Women	<p>Comprehensive and integrated stand-alone legislation or separate all-encompassing integrated legislation is needed to cover all forms of violence against women as recommended by UN DAW,^x rather than piecemeal and band-aid amendments to existing legislation. Such legislation would cover not only substantive criminal laws but also evidence and civil law approaches to VAW. It would remove all forms of evidentiary discrimination against women, such as the corroboration warning and the questioning of a complainant's past sexual history. This integrated approach is less problematic from a practical perspective and can also include empowering provisions as well as new structural approaches, rather than simple protection and punishment approaches.</p>
Family Law	<p>Specialist units need to be set up within the police force in all countries to deal with VAW. It is likely that a combination of policies and special units will enhance rates of detection and conviction.</p> <p>Comprehensive changes to family law are critical to address legal and financial discrimination faced by women. New laws should include protection from violence orders, a minimum age of marriage as 18 for both males and females, financial support for all parties without having to prove fault after separation and divorce, no-fault divorce grounds, equal rights to share in matrimonial property and family finances and specific adoption of CEDAW and CRC as guiding principles in the legislation itself.</p> <p>Family law legislation should contain a specific provision requiring the application of CEDAW and CRC to family law: 'A court exercising jurisdiction ...must...have regard to(e) the Convention on the Rights of the Child (1989) and the Convention on the Elimination of All Forms of Discrimination against Women (1979)'.^y</p>
Constitutional Change	<p>Constitutions should be amended to state that, where there is a conflict between women's rights to equality and custom, the former should prevail. For example, the draft proposed in the proposed Solomon Island Draft Constitution would rule out any ambiguity.</p>

Orienting and training of all stakeholders in the new legal machinery is critical. Cultural and attitudinal changes about gender and the law are required. The stakeholder groups include women themselves, the media, community groups, members of the legislature, lawyers, judges, magistrates, government officials, police and justice agencies (both formal and customary); all need gender and human rights training to pass new legislation, to reduce resistance to new laws and to adopt positive interpretations of law. It is important to use the media to accelerate cultural and attitudinal change. Working with legislators (members of Parliament) is a critical component of getting good legislation passed.

Ratification and reporting of CEDAW and other core human rights conventions is also significant in addressing VAW, as this strategy provides a further layer of accountability, and compels countries to update their laws and implement new measures, and then report on them to a global body. The reporting process of 'saving face' and avoiding embarrassment enforces compliance. It is therefore critical that all Pacific Island countries and territories ratify CEDAW and report on it regularly.

Comprehensive laws not only criminalising harmful practices against women, but providing for preventative, educative and empowerment measures are critical. An integrated, multi-sectoral, comprehensive approach, with the resources and technical support to implement new laws is also to be preferred. A starting point must be PICT Constitutions, which need to be amended to state that, where there is a conflict between women's rights to equality and custom or other harmful practices, the former should prevail. All reforms must address the traditional justice systems, which administer customary law as well. In the PICTs where parallel systems of justice operate, women need to have their rights upheld through both formal and traditional systems, and training is needed to ensure the just implementation of good legislation by customary law adjudicators as well.

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Notes

- a The terms “Violence against women (VAW)” and “Sexual and Gender based violence (SGBV)” are used interchangeably in this paper.
- b http://www.who.int/gender/violence/who_multicountry_study/en/
- c Criminal Code (Sexual Offences and Crimes against Children) Act 2002 (PNG); and Marshall Islands in 2005 amended its Criminal Code 1966, Cap 1.
- d This data does not take into account the 4 very recent changes made to the Solomon Islands criminal law legislation partially removing some of the gender discrimination in sexual assault legislation. The amendments have not yet been gazetted and are therefore not yet in effect. The graph does not take into account the changes.
- e Graph taken from the RRRT presentation to the 39th CRGA Meeting of SPC, (Nuku’alofa, Tonga, 6–9 October 2009); Regional Policy Agenda 5- Pacific Plan Implementation Three Years on; Ratification of Human Rights Conventions and Treaties in the PICTs .
- f Based on Jalal, 2009. *Gender equity in justice systems of the Pacific Island countries & territories: Implications for human development*. Technical background paper for the forthcoming Asia-Pacific Human Development Report on *Gender ‘Addressing unequal power and voice’*, UNDP; and UNIFEM Pacific, 2007.
- g Section 151(13) Criminal Code, Cap.1 1966.
- h Informant, November 2009, but unable to sight and cite legislation.
- i Section 17, Criminal Code (Sexual Offences and Crimes Against Children) Act 2002 (PNG); Kosrae State Code, Title 13, Cap.3, 1997, s.13.311; Chuuk State Code, Title 12, Part 1, Cap.4, 2001, section.2051; Pohnpei State Code, Title 61, Cap.5., 2006, s.5.141 (4); Yap State Code, Title 11, Cap.2, 2000, s.201(f);
- j Criminal Code, Cap.1, 1966, s.153 93;
- k *R v Tangi*, 343/1992.
- l UNIFEM Pacific 2007. See all compliance indicators under 1.21 and at 53. The UNIFEM/UNDP publication does not cover recent changes in both Vanuatu and Solomon Island legislation.
- m Jalal 1998 for all countries except RMI and FSM. Source of information for these two countries, UNIFEM Pacific 2007 and Jalal, 2009.
- n *R v Fungavai* 2007, TOSC 8.
- o Section 141 (3) Crimes Act 1969 (Cook Is); section 118 (2) Criminal Offences Act, Cap 18 (Tonga); and section 46 Crimes Act (Samoa).
- p Criminal Code (Sexual Offences and Crimes against Children) Act 2002 (PNG).
- q Criminal Law (Compensation) Act 1991.
- r The campaign for new sexual assault laws by the Fiji Women’s Rights Movement, based on a draft prepared by Ratna Kapur, has been shelved.
- s Criminal Appeal 4 of 2006, 26 July 2006, Court of Appeal. Extracted from Jalal & Madraiwiwi, 2008.
- t The writer of this paper, P I Jalal, was Commissioner for Family Law, and prepared the Fiji Law Reform Commission report, Jalal 2000.
- u The expert meeting was chaired by the Pacific Regional Rights Resource Team’s (RRRT) Imrana Jalal of Fiji.
- v For a copy of the full report and recommendation please visit UN DAW’s website - Handbook for legislation on violence against women (2009) UN DAW Handbook for legislation on violence against women (2009) - Epacvaw - <http://www.epacvaw.org/spip.php?article368>
- w Based on recommendations in Jalal, 2009.
- x Handbook for legislation on violence against women (2009) UN DAW Handbook for legislation on violence against women (2009) - Epacvaw - <http://www.epacvaw.org/spip.php?article368>
- y Section 26 (e) Family Law Act 2003 (Fiji)

Violence against women in Kiribati

Maere Tekanene

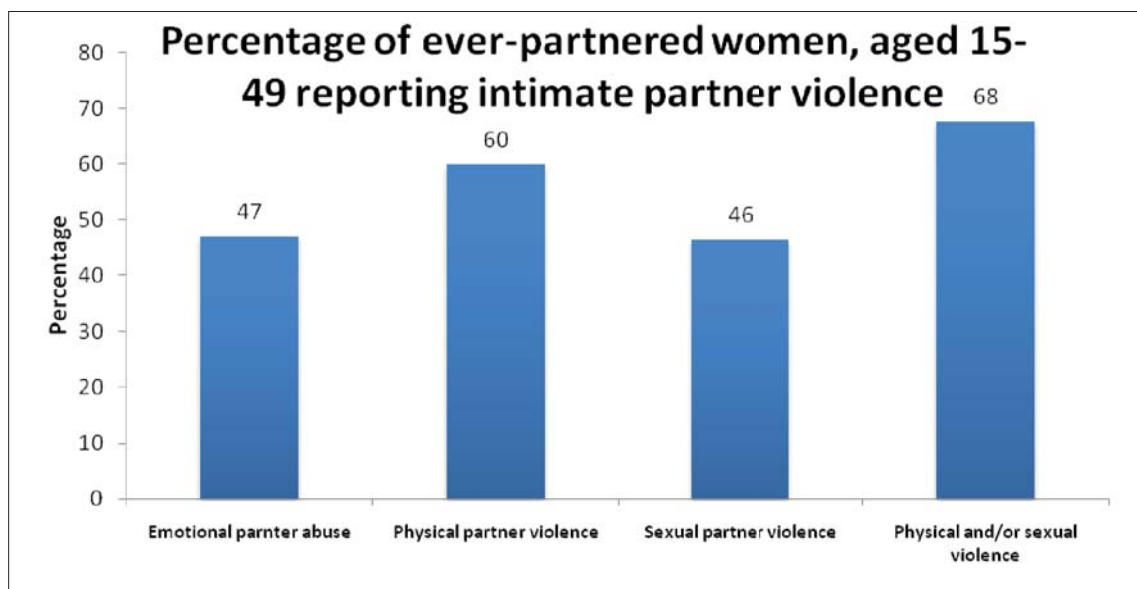
The United Nations Declaration on the Elimination of Violence against Women (1993) defines the term ‘violence against women’ as:

Any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.

Violence – cultural context

Violence against women for many of us in Kiribati is defined differently. VAW can happen if a woman is not behaving in compliance with some cultural expectations. While a woman’s obedience can maintain marital harmony between partners it can have its limitations in societies that use violence as a means of disciplining, controlling and correcting what is thought of as wrong behaviour. The findings of the Kiribati Family Health and Support Study 2009 tell us that obedience is a constraint because it allows limited freedom of choice to a woman. Some of the types of limitations can result due to this inequality between men and women. I regard these as a challenge for us in Kiribati.

Figure 1 Findings of the Kiribati Family Health and Support Study 2009



Source Kiribati Family Health and Support Study 2009 (Draft)

The effects of violence against women

The effect on the public service:

- Irregular attendance at work
- Low productivity at work
- Financial cost on police, health, magistrates, courts, lawyers and social workers
- Limited formal cash opportunities for a growing population (sexual violence)

The effects on the victim

- Vulnerability to STIs such as HIV/AIDS
- Vulnerability to diseases
- Low productivity in domestic duties
- Mental problems / Low self-esteem
- Unwanted / Unplanned pregnancies (MMR)
- Severe depression and Suicidal thoughts
- Anxiety and sleeplessness
- Death

The effects on the family

- Children missing school / coming late to school
- Poor health of children (IMR, U5MR)
- Children not focusing on school work
- Family members live in fear
- Low self-esteem
- Low productivity of family members
- Neglect or poor attention towards children
- Children are educated use of violence as a disciplinary tool in their homes

Types of violence

The operational definitions of violence used in the Kiribati Family Health and Support Study (replicating WHO multi-country study) are shown below (Kiribati Family Health and Support Study 2009, draft).

Physical violence by an intimate partner-

- Was slapped or had something thrown at her that could hurt her
- Was pushed or shoved or had her hair pulled
- Was hit with fist or something else that could hurt
- Was choked or burnt on purpose
- Perpetrator threatened to use or actually used a weapon against her

Sexual violence by an intimate partner-

- Was physically forced to have sexual intercourse when she did not want to
- Had sexual intercourse when she did not want to because she was afraid of what partner might do
- Was forced to do something sexual that she found degrading or humiliating

Emotional abuse by an intimate partner-

- Was insulted or made to feel bad about herself
- Was belittled or humiliated in front of other people
- Perpetrator had done things to scare or intimidate her on purpose (e.g. by yelling or smashing things)
- Perpetrator had threatened to hurt her or someone she cared about

Physical violence in pregnancy-

- Was slapped, hit or beaten while pregnant
- Was punched or kicked in the abdomen while pregnant

Physical violence since age 15 years by others (non-partners)-

- Since the age 15 someone other than partner slapped, pushed or shoved, hit with fist or with something else that could hurt her

Sexual violence since age 15 years by others (non-partner)-

- Since age 15 years someone other than partner tried to force or forced her to have sex or perform a sexual act when she did not want to

Childhood sexual abuse (before age 15)-

- Before age 15 years someone had touched her sexually or made her do something sexual that she did not want to

Controlling behaviour-

- Tries to keep her from seeing her friends
- Tries to restrict contact with her family of birth
- Insists on knowing where she is at all times
- Gets angry if she speaks with another man
- Is often suspicious that she is unfaithful
- Expects her to ask his permission before seeking health care for herself

Health Choices

Sex by right of marriage (marital rape or sexual violence) which ranks as 46% is clear indication that almost half the women in Kiribati are deprived of their reproductive health choices. This can lead to having more children than her health, time and family income can afford. Other health risks include exposure to sexually transmitted diseases such as HIV/AIDS and gonorrhea. Many studies in developing countries show that most STIs are transmitted by spouses or intimate partners.

According to the Kiribati Millennium Development Goals Report (2007), our MMR has been increasing and it will not be possible to meet MDG Goal 5: improving maternal health, by 2015. Given the rates of violence against women and the lack of coordinated prevention policies in the Ministry of Health, the police and the Ministry of Internal and Social Affairs, there is a great deal of work required to move us forward in this area.

To date also, the limited number of qualified medical gynaecologists compounds to the problem. A recent workshop for health workers in October 2009, supported by the UNFPA in Kiribati, informed participants about the low level of response to victims of violence. Despite the use of the WHO's definition of health as a guiding principle in the health sector, work had mostly focused on secondary measures, treating the victim, and there is a lack of interventions, such as referrals and brief confidential interviews, to prevent future abuse. The workshop was an eye-opener to all health care staff that participated.

Our Kiribati Development Plan stresses the importance of family planning, given the land and job opportunity constraints, and since Kiribati has a large Catholic population it would be useful to include the methods most preferred by Catholics as part of the information given to various communities. Some Catholics in Kiribati had mistakenly thought that family planning is forbidden, when the truth is they can plan their families using the Billing Method or Natural Way of Family Planning.

Productivity in the workforce

Women comprised 38% of the formal workforce, according to the 2005 census (Table 2). Participation of women was again lower than men's (62%) because of their multiple domestic roles at family level. Of the number in the formal workforce (5038) two thirds are likely not to perform to their best potential due to this social problem. A large proportion of women in the country are employed in the nursing and teaching. Absence, irregular attendance to work and poor productivity related to VAW not only may fail them good chances of promotions but also can cost the public service and those in their care and serve as their customers of the day.

Table 1 Work Status of women and men 15–50+ (employer, employee and self employed)

Total	13133	
Male	8095	62%
Female	5038	38%

Source: Report of Kiribati Population Census 2005

Costs of services such as from the police, health department, social welfare and service providers in civil society organisations are incurred for any domestic violence. Calculations of estimated costs of VAW in Kiribati have not been undertaken but studies in neighbouring countries such as New Zealand show that average costs for one case runs at \$11,000. In Kiribati, the cost can be higher as transportation sometimes involves unplanned charter of domestic flights to attend to victims and clients outside urban areas.

Women in the rural and informal sectors

More than 60% of women work in the informal sector and come mostly from rural areas. They do domestic duties, such as being care-givers to their families; and they are church fund-raisers, cultivators, copra cutters, volunteers in the women's NGOs of their churches, and home entrepreneurs in various types of income-generating, mostly sewing and making handicrafts. Some earn money as food vendors on roadsides. Some are coastal fishers and get involved a lot in post-harvest work such as marketing fish. One of our obligations as a signatory to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) ratified by our government in April 2004 is to seek support to promote women's roles in rural areas and doing work in the informal sector.

The Kiribati Government does provide some avenues and support to these rural communities by providing a local produce outlet, but what use are the skills of any rural woman and those within the informal sector if they are not given the support by their own partners, as shown in the rates of abuse? The goals laid down in our Kiribati Development Plan, which seeks enhanced sustainable economic growth for the period 2007 to 2011, may not be realised if we fail to address VAW and continue to ignore the bulk of the local population that can contribute to the needs of the family and to nation-building.

The report of the study carried out in Kiribati shows that children who witness violence have more emotional and behavioural problems than those who do not. Emotional violence affects one's self-esteem. Children going to school after a morning fight may not concentrate at school in the same way as a classmate who comes from a peaceful and happy home. While we claim ourselves to be loving people, we have not really thought about how our loved ones suffer from the three types of violence covered in this study: the physical, the emotional and the sexual. My last presentation to various target groups received both negative and positive comments. Some participants took the results personally before seeing it as an issue requiring their support.

Conclusion

The following policy recommendations are based on the findings of the Kiribati Family Health and Support Study:

- SAFENET – establish standards of procedures towards service to victims by all partners (government and civil societies)
- Increase the budget for community education on preventing DV / VAW
- Strengthen men's participation in prevention of DV / VAW and in reproductive health
- Government policy statements on response to VAW by the health sector
- Train more health workers on response to VAW
- Conduct parenting courses through community education packages
- Come up with a more specific laws on VAW. This will include domestic violence, maintenance of children etc.
- Strengthen the capacity of the Women's Unit through more qualified staff
- Establish a unit within the President's Office to take on the role of gender mainstreaming and monitoring to ensure that gender perspectives and issues are not ignored in any government division's undertakings.

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Discussion

A number of questions was raised from the floor:

- What is your view of physical violence of women towards other women, does that occur in the region?
- Is a husband ever justified in disciplining his wife, not really assaulting her?
- Do you have repeat cases of domestic violence come to your offices?
- There is evidence that there is also violence against men. Is this a challenge?

Statistics show that in 97 per cent of cases women are the complainants and men are the aggressors, so in three per cent of cases men are assaulted. But it is usually in self defence. There is a significant number of women in PNG imprisoned for assaulting other women, in some cases killing them, and it is usually involves fighting between co wives. There is no such thing as a level playing field between men and women. A man has superiority economically and in many other ways, so if he is hit by his wife he doesn't have to deal with the same issues as his wife would.

The violence tends to be more severe, with worse consequences. Violence by men against women tends to generate far more fear, while the other way around is often regarded as merely laughable.

Statistics show that problem is violence against women, but I agree that if it is against men is also a problem, violence is a problem across the board.

In the period 2004-8 Fiji Women's Crisis Centre attended to 8000 new clients and about 10,000 repeat visits, which are not necessarily due to repeat violence but to the problems women are facing when they are pursuing a case through court. More women are asserting their rights in terms of taking it a step forward by reporting it to the police, not necessarily taking it further but taking a stand. Also because of poverty and lack of community support, some women stay in situations of violence and all we can do is give them the safety tips on practical things, such as the best places to keep knives and keeping a set of clothing in a neighbour's house so they can better protect themselves and their children.

The issue of domestic violence was in the first place a difficult thing to take to the PNG government. It was the lobbying of women NGOs that managed to take it to government level and the current government is very supportive. But if women do not continue to mobilise for their own benefit I wouldn't know how or what the response would be. Thoroughly credible information from the gender-based violence survey has had a powerful impact on people who are in a position to influence what goes in the national budget. That is where the work is so important, with community groups who can continue to exert pressure.

- What exactly provides the spark that creates the violence? What extent is it from unemployed young men?

Talking to students, some of them police academy recruits, the men suggested that if women cooked food properly it wouldn't happen, or if they dressed nicely to welcome their husbands home it wouldn't happen. But one said if that he lived in a violent home and that his father looked for any opportunity because he had the power, if it wasn't one thing it was another. A Kiribati study shows that the justifications are jealousy, then drinking, disobedience and then refusal or lack of response to sex; in Solomon Islands it is when women talk back. People look for different justifications violence, but it occurs when people have the power to be violent.

I think some studies show there are higher rates amongst under employed people, although that doesn't mean that unemployment is the problem. The only thing we are sure about is that there is not one single cause of violence and the best way of explaining it is with the environmental model -- to look at the person within the family, within the society, the multifactoral issues. It feeds back strongly into gender, the biggest factor we know about, and power relationship between men and women. Yes, people get angry about things at work or not having work, but they tend not to hit their friends or their boss, but wait until they get home and hit their wife.

Plenary 8

Data issues: surveys, censuses and institutional initiatives

**Gerald Haberkorn
and Arthur Jorari**

Keynote address

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Population and development data: disentangling facts from fiction and *almost matches*

Gerald Haberkorn and Arthur Jorari

The short life and quiet death of the Cairo Program of Action

It might appear to some a rather strange statement indeed, to speak of the short life and quiet death of the 1994 Cairo International Conference on Population and Development (ICPD) Program of Action (PoA) at this symposium featuring a conceptual and strategic focus on '*accelerating*' this very program of action. But many of us in the population and development field, particularly those involved in the long lead-up to September 1994, have seen little tangible follow-up on many of the well-conceived and important action points. Whether or not we are indeed talking about a quiet death—or perhaps can expect a gradual awakening from only a very extensive period of hibernation—we are hopeful that this symposium may shed some light on this conundrum.

I trust most of you are familiar with the 13 policy themes of the ICPD's PoA, featuring hundreds of objectives and action points. They are the result of a broad consensus reached after some two years of hard work, arduous technical preparatory meetings and—a UN first I seem to recall—embracing the participation of NGOs to facilitate a broad-based, *whole-of-society/ies*—acceptable policy document. Arriving at a largely consensual PoA that included the concerns of a multitude of stakeholders, from hardline and single-theme NGOs to hardcore and one-eyed perceptions of some religious faiths, from democratic governments to those pursuing alternative governance systems, the private sector, large and populous countries like China and India sitting side-by-side with small island states—achieving something of this nature is a huge political achievement; whether or not this would translate into practical gains on the ground, only time would tell.

Time indeed did tell: this is evident from developments in the 1990s. UNFPA, with such an all-encompassing strategic and operational mandate, was able to cherry-pick, and cherry-pick it did, as reflected in the fact that in the aftermath of Cairo, some 2/3 of its operating budget became dedicated to reproductive and sexual health, while other program areas of previously significant UNFPA engagement either operated on shoestring budgets or fell by the wayside altogether. Population and development, we understand, fell to around 10% in terms of budget allocation, and population data collection in general and population censuses in particular were among the many policy casualties. Surprisingly, one may think, the world's pre-eminent and respected Population and Development agency was depriving itself of the very foundation for informed policy development, and as importantly, for ongoing and regular policy progress monitoring. We shall return to this aspect later.

The fact that the 2000 round of world censuses (1996–2005) was not a major success—with 28 countries unable to do a census, 17 in Africa alone—would not have been helped by this situation. The Pacific fared best as the only sub-region in the world with all countries and territories able to undertake a census; but while coverage was 100%, quality suffered substantially, due to severe funding shortfalls, prompting many operational shortcuts not commensurate with census best practice. In other words, coverage in terms of censuses conducted was excellent, coverage in terms of quality, was questionable in several countries (Haberkorn & Jorari 2007).

The emergence of the MDG (Millennium Development Goals) framework as the pre-eminent international development policy framework resulted from a negotiated merger of key elements of Rio, Cairo, Copenhagen, Beijing and Nairobi Programs of Action and Priority Agendas into one policy pot—a major achievement in terms of consensus-building. As with most consensus-building, outcomes are usually more pleasing to those driving the process than to those being driven. With the main focus on cutting back on priorities, key operational elements critical to tracking and reporting on the policy successes and failures of the surviving priorities often disappear altogether, not because they are not seen as important, but because they have no one championing their cause. I am talking about data and development indicators, I am referring to measuring and regular monitoring of development progress. For instance, the Cairo PoA, in its Chapter 12, paid at least some lip service to data collection, analysis and dissemination, without much of a tangible follow-up in subsequent years. (It is indicative that for the first time since the 1980 round of censuses in the region, no UNFPA Suva-based population and development adviser was available to provide countries with TA.) The MDG framework, on the other hand, is completely silent on that matter: other than calling for the reduction of a specific sociodemographic, health or economic development indicator value by half in the year 2015, or doubling another policy outcome during the same reference period, the framework quietly assumed that (i) reliable development benchmarks and (ii) systems to monitor progress regularly were universally in place.

Table 1 ICPD Program of Action and MDG framework

ICPD POA	MDG Framework (I = number of indicators)
1. Interrelationship between population, sustained economic growth and sustainable development	Goal 1: Eradicate extreme poverty and hunger (I = 5) Goal 7: Ensure Environmental sustainability (I = 7)
2. Gender equality, equity and empowerment of women	Goal 3: Promote gender equality and empower women (see also: Goal 2: universal primary education ⁹ (I = 4))
3. The family, its roles, composition, structure	
4. Population growth and structure	
5. Reproductive rights and reproductive health	Goal 6: Combat HIV/Aids, malaria and other diseases (focus on contraceptive prevalence rate) (I = 7)
6. Health, Morbidity and Mortality	Goal 4: Reduce child mortality (I = 3) Goal 5: Improve maternal health (I = 2) Goal 6: Combat HIV/Aids, malaria and other diseases (I = 7)
7. Population distribution, urbanization and internal migration	
8. International migration	
9. Population, development and education	Goal 2: Achieve universal primary education (I = 3) (Note: some aspects covered)
10. Technology, research, development (data collection, FIH/socio-economic, population research)	
11. National action (policies, plans, resources mobilization)	
12. International cooperation	Goal 8: Develop Global Partnership for development (I = 16)
13. Partnership with Non-governmental sector.	

Those involved in the tracking of development progress know that this is neither universally the case across the broad spectrum of population and development statistics nor applicable to all Pacific Island countries and territories, any more than it is a recent phenomenon. A review of key population and development concerns for Pacific Island countries for 2001–2005 highlighted that most still regarded the ICPD PoA theme dealing with data collection and a need for population research (No.12) as important. Indeed, Papua New Guinea, Solomon Islands, Samoa and Nauru actually regarded it as one of their top three population and development concerns—acknowledging the need for solid evidence to guide policy development and planning (Haberkorn 2007).

Current sources of collection: periodicity of capture, availability and accessibility

Notwithstanding stable or declining operating budgets, high rates of staff turnover or shrinking staff numbers, and low political recognition (at times bordering on outright indifference) it is quite remarkable what statistical achievements and developments have taken place in recent years across the region.

Population and housing censuses

As stated earlier, the Pacific region was the only sub-region in the world to have achieved a 100% census coverage in the 2000 round of censuses, notwithstanding serious financial constraints experienced by census takers worldwide at the time due to a shift in the climate for population policy and funding in the post-ICPD years, which meant that many countries, particularly in Africa, did not manage to conduct a census at all.

The 2010 round of Pacific censuses kicked off in the Pacific region in 2005 with censuses in Kiribati and Palau, followed by a further six censuses in 2006, one in 2007 and two in 2009 (Table 2). The region is on track to maintain its complete coverage, and to do so while featuring many improvements. Fiji was the first country utilising automated data capture and making extensive use of GPS technology and both technologies

were also utilised in the November 2009 censuses in Vanuatu and Solomon Islands. Both these countries have also made extensive use of satellite imagery and aerial photography to refine their census cartography, with an improved capture of dwellings expected to translate into more accurate and complete population coverage. All countries that have completed their census reports are making concerted efforts at more active dissemination of their census data through data user workshops and seminars, policy dialogues, and an extensive and varied publication program, comprising traditional census reports, demographic and population profiles, population fact sheets for policy makers, population and development atlases, GIS and web-based applications.

Table 2 Pacific Island census and household survey activities, 2004–2020

PACIFIC ISLAND COUNTRIES	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MELANESIA																	
Papua New Guinea			DHS		HIES		CEN										CEN
Fiji			CEN		HIES			DHS					CEN				
Solomon Islands		HIES	DHS			CEN		HIES								CEN	
Vanuatu			HIES			CEN			HIES	DHS						CEN	
MICRONESIA																	
Kiribati		CEN	HIES			DHS	CEN	HIES				CEN					CEN
FSM		HIES					CEN	DHS	HIES								CEN
Marshall Islands	HIES			DHS			CEN	HIES								CEN	
Nauru			HIES	DHS				HIES	CEN								
Palau		CEN	HIES				CEN	HIES				CEN					CEN
POLYNESIA																	
Samoa			CEN		HIES	DHS		CEN					CEN				
Tuvalu	HIES			DHS			HIES		CEN								
Cook Islands	HIES		CEN					CEN	HIES				CEN				
Niue			CEN				HIES	CEN					CEN				
Tokelau			CEN					CEN	HIES				CEN				
Tonga			CEN		HIES		DHS						CEN				

Unlike for the 2000 round of censuses, UNFPA has re-engaged in the census field, which should augur well for the 2010 census round and, one hopes, will mark their relegation of their post-Cairo decision to disengage from data collection at large as a *momentary lapse of reason*. In the region, we are enjoying the remaking of good technical collaboration with UNFPA, resembling glimpses of the 1990s, which we hope will continue to strengthen, as we have a full census technical assistance program in front of us—too big to handle for either of us alone.

Household surveys

Most countries also had a quite active household survey program, largely to meet a growing demand for statistical evidence to support development progress monitoring—addressing both national and international data and information needs. Since 2004,

- 12 PICTs conducted a Household Income and Expenditure Survey (HIES), three of which were completed in 2008 or are currently (November 2009) in the field, and a further 13 are planned over the coming four years
- five countries undertook a Demographic and Health Survey (DHS) in 2006–2007, which apart from Papua New Guinea, was the first time such comprehensive and quite complex household surveys were undertaken in the region. A sixth DHS is currently underway in Kiribati, and a further four such surveys are planned over the coming four years—pending, of course, the willingness of our key development partners to continue to commit to a multi-year and multi-country household survey program.

While these surveys provide an enormous wealth of information, ranging from basic demographic and health statistics otherwise not available from administrative databases to very comprehensive behavioural and attitudinal accounts related to health practices, the future of such expensive statistical collections, which are funded largely from bilateral and multilateral development grants, will ultimately hinge on more regular and tangible policy-uptake, greater access to and greater use of existing datasets for more comprehensive policy analyses and more concerted efforts to strengthen basic administrative databases. DHSs are too resource-intensive (in terms of costs, staff and time) merely to yield important demographic and health indicators, at best every five years. This ought to be doable more cost-effectively and in real-time with simple, functioning and thus sustainable

administrative databases: Table 3 illustrates, for instance, the effectiveness of civil registration in supporting the currency of data in health and education information management systems. Undertaking a regional stocktake of available national MDG indicators for the UNDP Pacific Centre last year alerted us to an interesting situation: looking at child health (MDG Goal 4), for example, shows that while data exist for all countries but Tokelau, data from half of the countries do not lend themselves to current situational analyses and progress monitoring, as the underlying statistics are quite dated. In other words, while coverage is near 100%, the usefulness of half these data is highly questionable. A second key message here is that according to sources available to us one year ago, none of the relevant administrative databases or information management systems contained up-to-date statistics.

Table 3 Timeliness of current PIC health statistics pertaining to MDG Goal 4

MDG-4 Child Health	4.1 Under five mortality rate (per 1000 live births)	4.2 Infant mortality rate (per 1000 live births)	4.3 Proportion of 1 year old children immunised against measles (%)	Data Sources
	Latest	Latest	Latest	Next
Cook Is	26.1 (2001)	11.9 (2001-05)	98 (2001)	<i>Health-Admin</i>
Fiji	22.4 (2002)	17.8 (2002)	76.4 (2002)	<i>Health-Admin</i>
FSM	47 (2001)	40 (2001)	84 (2001)	<i>Health-Admin</i>
Kiribati	69 (2005)	52 (2005)	76 (2001)	<i>Health-Admin</i>
Marshall Is	46 (DHS 2007)	33 (DHS 2007)	54.1 (DHS 2007)	2012 (14)
Nauru	38 (DHS 2007)	38 (DHS 2007)	80 (DHS 2007)	2012 (14)
Niue	19 (2006)	7.8 (2006)	99 (2002)	<i>Census/Health-Ad</i>
Palau	38.9 (2005)	20 (2003-05)	99 (2002)	<i>Health-Admin</i>
PNG	88 (2000)	64 (2001)	53 (>1995)	<i>Health-Admin</i>
Samoa	24.7 (2006)	20.4 (2006)	99 (2002)	<i>Census/Health-Ad</i>
Solomon Is	37 (DHS 2007)	24 (DHS 2007)	80.6 (DHS 2007)	2012 (14)
Tokelau	n/a	33 (1997-2000)		<i>Health-Admin</i>
Tonga	21.9 (2006)	19 (2006)	95.8 (2002)	<i>Census/Health-Ad</i>
Tuvalu	36 (DHS 2007)	31 (2007)	74 (DHS 2007)	2012 (14)
Vanuatu	30 (MICS 2007)	25 (MICS 2007)	37 (MICS 2007)	2012 (14)

Administrative population databases: civil registration and health information systems

Such problems of timeliness could be easily overcome with functioning civil or vital registration systems, and health information management systems. Systems of this kind are also better placed to capture key demographic events, like births and deaths, and important health indicators, like immunisation coverage and incidence rates of ante- and post-natal visits, and to capture or record these in real time (soon after they occur) rather than relying on retrospective questions and memory recall, as is the case with censuses and survey.

The reality in many Pacific Island countries, however, is somewhat different. While the French and US Pacific territories have well functioning systems, and the smaller island countries, such as Niue, Tokelau, Nauru, Tuvalu, Cook Islands and Marshall Islands, have made considerable progress over the past decade, as did Tonga, Samoa and Fiji, the latter three particularly in the recording of births, overall registration will remain a challenge for Papua New Guinea, Solomon Islands, Vanuatu, FSM and Kiribati. Without tangible benefits, or consequences for non-registration, it would seem folly to expect rural folk to travel for miles, possibly incurring considerable travel costs to do so, merely to tell an anonymous bureaucracy about the birth or death of a family member. With the vast majority of births in most Pacific Island countries these days attended by midwives, nurses or traditional birth attendants, it would appear useful to empower these health workers with birth registration, and possibly even the issue of a birth certificate. Death registration, both actual numbers and accurate cause of death, remains far more challenging, with people in rural areas usually being buried on the day of death and without the need for a death certificate.

While most countries have set up separate agencies, or specific units in various government departments to deal specifically with the *collection* of birth and death statistics, *reporting* is often undertaken by different agencies, with reporting delays of several years not unknown (Haberkorn 1998). In other words, improving on data quality and timeliness becomes a double challenge at both the recording and reporting ends.

Challenges in developing and sustaining functioning health information management systems are even more pronounced in most countries, particularly in outer islands and rural areas, given the multiplicity of roles nurses and health practitioners are expected to undertake, often working under challenging conditions—from providing health care to recording and reporting of health statistics. While the lack of appropriate training or ongoing technical support provided by headquarters is bad enough in itself, the lack of feedback on what this information is useful and actually used for is also somewhat de-motivating. When combined with non-enforcement of regular reporting requirements, problems pertaining to data and information coverage, quality and timeliness should not be surprising.

Disentangling fact from fiction: nine challenges and myths

Much has been written and more has been said about the much maligned state of data and statistics pertaining to social and economic development in the Pacific. Many critical comments are valid and do assist those of us in the ‘data business’ to address deficiencies, or at least allow us to alert the two key groups of players able to make a difference to take note.

- These are first and foremost national statistical agencies or the producers of official statistics, whose core business, like that of any national statistical agency across the world, is the regular collection and compilation of official statistics. All countries have statistical legislation, all NSOs (national statistical offices) have an annual budget with clearly defined operational objectives (i.e. identified activities and outputs for which funds are sought and a budget is allocated) and I would assume all NSOs are accountable for their expenditure and outcomes.
- The second group is the users of official statistics—national governments, civil society and the private sector in Pacific Island countries, as well as the international development community, such as countries’ bilateral development partners, development banks, technical agencies (like the UN system) and regional organisations like SPC.

The vast majority of comments, however, represents a mix of hearsay or ill-informed generalisations, and reflects a lack of capacity, and sometimes a lack of willingness, I dare say even laziness, by data users to look actively for information. Let me take you through some of the more obvious misalignments between statistical facts and fiction across the region.

There’s nothing there: the need to differentiate between varying degrees of nothingness

This wail of ‘nothing there’ represents the standard cry by those not knowing what they are looking for or where to look, those not finding what they look for, those not knowing what to do when they find something, and a minority of complainants who have actually searched everywhere, googled and mined known databases and contacted those in the know or who should be in the know.

In other words, this data void reflects both on those looking (or not looking) and on varying degrees of *nothingness*: a combination of:

- data holes (no statistics, data or information available)
- data mines (in this case, a source of information is available, but unknown or unnavigable by interested users)
- data gaps (something is there, but not exactly what the user is after).

Availability versus accessibility

Having established that the lack of data and statistics reflects on the prospective user and the existence of statistics, the single biggest confusion out there is mistaking a lack of access, of immediate and easy access, with availability. Our experience has taught us to tread with care when we come across sweeping generalisations like, there is ‘nothing on maternal health statistics in the Pacific’ or ‘there are no up-to-date statistics on economic growth’. The first point is of obvious relevance to this symposium on population and development; the second represents a regular expression of frustration by international stakeholders late last year, given a repeated and explicit interest following the onset of global economic and financial crisis.

To return to maternal health statistics, critics are correct in that there is ‘not much there’, visibly there, readily accessible on a shelf. This is exactly what we found when we started on a joint project with Family Planning New Zealand several months ago, to develop a *Reproductive Risk Index* for the Pacific. A Family Planning New Zealand staff attachment with SPC’s Statistics and Demography Program (SDP) for 2 x 2 weeks doing much

of the leg work and data mining, in collaboration with about another 6 person-weeks involving 4 SDP staff at varying times, provided most of the input data required for most countries but:

- data holes remain for chlamydia prevalence rates and maternal deaths in 9 out of 21 PICTs
- two PICTs have no required input data for 4 and 5 respectively of the 10 RRI composite indicators.

In other words, we are doing quite well for most countries and for most of the health input data required for this particular exercise.

The bottom line is: know what you want, have well defined objectives, put in some hard work yourself and establish two-way partnerships with agencies sharing mutual interest and providing complementary expertise. Then publish the results with clearly visible blanks drawing attention to countries with missing data.

Almost-match in the conceptual relevance of what is available to what is needed

This refers to the frequent use of proxies when ‘real, better, more accurate’ statistics are unavailable. A good, topical example concerns current constraints we face trying to keep a tab on (monitor) current financial and economic developments, and the impacts and consequences of the Global Crisis on Pacific Island countries, and having to work with data and indicators that may not necessarily have the strongest relevance to what we are trying to assess. However, we continue to use these data and indicators, because they represent ‘the best we have’, and ‘everyone understands what we are talking about’. National GDP statistics or estimates, or more precisely the annual growth rates and per-capita estimates, are regular features in most country reporting. While they obviously are important indicators of the impact of the crisis on economic development (and also reflect the impact of job losses and falling exports) what we really need is getting a better handle on how these impacts trickle down to people, households, specific population sub-groups (the poor) and communities, and we need to do this in real time to inform policy. Current five-year intervals of household surveys, and censuses run every five or ten years, cannot capture these real-time dynamics.

The bottom-line is: develop targeted monitoring systems.

The absence of real-time development data and indicators

In the latter part of 2008, we undertook an MDG indicator stocktake for the UNDP Pacific Center, and found that while we have access to information on most indicators, for 62% of all indicators across all countries we talk about information that is either older than five years, or simply unavailable; in only 1 in 4 cases (23%) are data ‘current’—defined here as information less than two years old (Haberkorn 2009a). Table 3 illustrates this dilemma, looking at child health, one of the better covered MDG goals, where data are universally available (except for one indicator in two out of 15 countries), yet with only half of the information ‘current’ (more recent than two years, at the time of the stocktake). Data pertaining to 2001, even 2005, are of little use to make realistic current assessments of child health in 2009, in terms of tracking progress with respect to achieving one’s MDG goal by 2015, and to ascertain what modalities might need to be put in place urgently to get there.

The bottom-line is: (re)development of functioning administrative databases, in this case Health Information Systems, really is the only viable and ultimately sustainable way to go.

The irregularity of major statistical collections

The ‘current’ data just referred to are current only because SPC’s Statistics and Demography Program was able to secure a generous financial grant from ADB, AusAID and NZAID in 2006, to undertake a regional pilot Demographic and Health Survey program in 2007–2008, to test if this methodology first, is workable in small island environments (with sampling and privacy issues presenting perennial challenges) and secondly, would prove an effective tool to capture important demographic and health information otherwise not available. Without access to these *ad hoc* funds, we would not have much of a story to tell today.

This pilot has shown that, while the methodology is workable and effective, it also proved very costly, and hence is clearly inappropriate in terms of cost-effectiveness for use more than every five years or so. This, however, is not in line with providing *real-time* development statistics and indicators to monitor national development progress and impacts as well as the consequences of global events.

The bottom-line is: see previous point on (re)developing functioning administrative databases.

Lengthy lead-time to produce key development statistics and indicators

Apart from not being able to provide real-time development information consistently, anything derived from statistical collections rather than ongoing compilations further entails a considerable lead-time to provide the requested information; with statistics and indicators derived from censuses and household surveys, this can take up to two years (often more) from the time the collection takes place. It is not instant access, as one would have from well designed and maintained (managed) administrative databases.

The bottom line is: many statistics are already dated by the time they get released.

Absence of alternative indicators

Another major constraint, and to statisticians, demographers and economists in our experience undoubtedly one of the toughest challenges, is to look and operate outside our professional comfort zones and continue to provide products and services to our users that are meaningful to them. When politicians, policy-makers and planners do not use our statistics and indicators, or do not queue up for the next release of quarterly reports, it is not always because they ‘can’t be bothered’, ‘don’t understand numbers’ or regard statistics as ‘making for bad politics’ (and policy). Often it is simply a matter of what is on offer meaning more to us as producers of statistics, than to the users—our clients and people we regard as our stakeholders.

I return to an earlier reference to changes in GDP and per capita GDP over time. I know that these, if available on a regular basis, are huge and powerful indicators to track the health of a national economy over time, and particularly so in the case of economies where the vast majority of the population contributes to GDP or is affected by changes in GDP. But they mean nothing to a subsistence farmer in the central highlands of Papua New Guinea, a subsistence fisher on an atoll in Micronesia or an already unemployed and disenchanting youth living in one of the Pacific Islands’ many fast growing informal urban settlements.

It is not a matter of either . . . or; rather, it is more a challenge to complement standard statistics and indicators with those that have a clear relevance at the household and even community level—concepts of general well-being and quality of life; sustainable livelihoods and community resilience; access to opportunities; traditional wealth and the value of culture.

Our challenge (bottom line) is twofold:

- Regular statistics on the radar of most NSOs need to be complemented by measures that capture individual household well-being, equity in the distribution of resources and the general welfare of citizens—all of which is indispensable for monitoring human development.
- We also need to engage more vigorously with data users and stakeholders, who may not always know what they want, but do know when what is available does not meet their needs.

A myriad of statistics and indicators

Going from nothing to plenty, and having to choose the ‘correct’ development indicator from various menus, is a recurrent nightmare for data users, when confronted with different values for the same indicator reported by different government agencies and regional and international organisations. It is equally irritating to the producers of a particular source data (e.g. a national demographic and health survey) if this data source, when used to calculate or compile specific development indicators, not only produces different results, but has the potential to depict completely different policy scenarios. As this has been reported extensively over time (Haberkorn 1997; Haberkorn & Jorari 2007), without really leading to many tangible improvements over the years in terms of statistical coordination, we do not wish to waste our time here in developing this further.

The bottom-line is: stop talking, and start walking the talk of coordination.

Lack of interest and sustained, tangible commitment

The need for vigorous and regular interaction between data users and producers at country level, in addition to regular interactions and statistical coordination between agencies, to which we have just referred, represents to us the apex of challenges in creating and sustaining an interest in a culture and associated practices of informed decision-making at national level. No national or regional policy document, development plan or

framework makes an appearance these days without explicit reference to governance, transparency, monitoring and evidence-based decision-making—yet without ever paying more than just lip service to how we ensure access to a sustainable supply of the basic ingredient, the fuel that drives such processes and systems: statistics, indicators, information.

A brief review of major challenges and constraints experienced by Pacific Island NSOs, undertaken last year for the inaugural ESCAP Committee on Statistics, identified agency and institutional capacity issues, and a perceived lack of political recognition and financial support as topping the list (Haberkorn 2009b). That these priority concerns are seen by Pacific Island government statisticians as key current challenges to statistical developments in the region is not surprising, when one considers such basics as staff numbers, with half of the region's NSOs having fewer than a dozen statistical officers to undertake a comprehensive set of statistical activities on an ongoing basis. It exacerbates the situation that most NSO staff are statistical clerks with formal education not exceeding completion of high school, and that most young graduates are, after some years, promoted out to national planning agencies, treasury departments or central or reserve banks offering higher salaries and greater social and political recognition.

The bottom line is: there is an urgent need for countries' greater commitment to assess and redress national challenges and constraints to an efficient and effective functioning of their national statistical systems. This includes establishing greater parity in position classifications and pay structures with other government departments, provision of budgets and staffing levels commensurate with growing demands on national statistical agencies, ongoing staff development and succession planning—all of which is best addressed in a long-term national statistical development policy and strategy framework.¹

Moving from availability to greater accessibility and utilisation

Having discussed the 'short life and quiet death' of the ICPD Cairo Program of Action, the availability and accessibility of population and development data and several of the many associated myths and challenges, we conclude with a brief discussion on how to move beyond making population and development data more available and accessible, to increasing their utilisation and thus their overall usefulness, hence justifying the collection of them in the first place. In doing so, we expand on three of the nine challenges previously referred to:

- *'there are no data out there'*
- *data are available but not easily accessible*
- *there is no demand from national government institutions and agencies.*

'There are no data out there'

As noted in the previous sections, there are many data available from censuses and surveys as well as administrative records. This particular myth of non-existence persists, as many users in both government and civil society lack the necessary skills and understanding of their own data needs. Our collective experience in data production and policy reviews has shown that many users do not understand the concept of a development indicator, and so have great difficulty defining their organisation's minimum development indicator requirements, allowing them to measure and monitor development progress. Where such indicator lists are available, such as in national sustainable development frameworks or other policy documents, these indicators more often than not are taken verbatim from external policy documents, without an understanding of their underlying design, how they are calculated, and what baseline statistics need to be collected, and in what form and frequency. Furthermore, many of these users lack the knowledge and skills to interpret these indicators, and apply them to and integrate them into policy development, planning or monitoring and evaluation processes.

We came across such situations on a regular basis some time ago (2005–2007) when we executed a UNFPA funded project on integrating population and gender issues into national development policies in a number of UNFPA member countries in the Pacific. The aim of this project was to increase the understanding and uptake of population and development data and information in policy development and planning, assist users in

¹ Some countries have started work on this in partnership with SPC and the Australian Bureau of Statistics, or in bilateral arrangements with Statistics New Zealand. A more comprehensive joint venture between SPC and PARIS21 is planned from 2011, to develop National Strategies for Statistical Development (NSDS) in interested PICs.

understanding key population and development inter-relationships, and increase their ability to interpret these indicators and apply them into policy, planning, monitoring and evaluation processes in their organisations. While we achieved modest success in some countries, as illustrated in a more pronounced acknowledgement of population and development in national and provincial policy documents and plans, impact and sustainability were, and continue to be negatively affected by:

- national agencies sending the wrong people to attend these in-country workshops. Those in greatest need, who actually work in policy development and or monitoring, usually do not attend, while those who do attend lack the room and or power to apply what they learned
- high staff turn-over. Where the right ones did attend, they too often moved on fairly quickly to other agencies offering better career prospects
- little interest in follow-up by participants and their supervisors
- a large number of training opportunities and workshops on offer by different development agencies (usually without coordination of efforts between agencies) distracting from follow-up and implementation
- an unhelpful general lack of understanding and appreciation of statistics and data for evidence-based decision making further up the political ladder.

Data are available but not always what is needed or in an accessible form

The inappropriateness or inaccessibility of the data that are available continues to be a challenge in the Pacific, as noted earlier, because there is no regular data user–producer dialogue giving users the opportunity to inform data producers of their information needs, and providing a platform to discuss ways of collaboration to produce the required information. While in theory at least, data users ought to have a good understanding of their data or information needs, it is important that users in key sectors engage in regular consultations with data producers to ensure statistical collections are specifically linked to sectoral and national development policies and strategies. Without such ongoing consultations, the risk continues that data collected will not be used and or will be disseminated in ways that are not useful.

One way of tackling this challenge is for national statistical and planning agencies to step up, show some leadership, collaborate more actively and on equal political footing, and also involve key sectoral statistics producers and users, in defining data needs, roles, responsibilities and timelines for collection and analysis that feed into actual data requirements (e.g. *before* a national development plan is formulated, or a multi-year sectoral development policy is planned in detail or a monitoring report is commissioned). These roles, responsibilities and timelines are easily documented in a simple MOU, signed off at ministerial level, and given more visible political backing, they become more transparent. With that, key agencies and players become more accountable, or at least can be held more accountable if the political will is there, and at annual budget time, budget allocations can be tied to agreed performance targets.

SPC, in collaboration with UNFPA and other technical agencies, has been assisting Pacific Island countries and territories for some time now in making population and development data and information more available and accessible; we collaborated on several joint projects over the years, as just outlined. The regional DHS pilot program, involving four countries, with a fifth one, Kiribati, currently under way, provides a tangible example of a recent and successful multi-agency collaboration involving many players (ADB, AusAID, NZAID, Macro International, UNFPA and UNICEF) working with us. In terms of visible products, SPC has developed PRISM and Pop GIS, both of which are currently undergoing major changes in design and architecture, making them even more user-relevant and -friendly, with interactive table builders and regional mapping facility on PRISM representing two such tangible improvements. In terms of more traditional publications, we have developed a new series accompanying our comprehensive DHS reports: mindful that politicians and senior policy-makers have neither time nor interest to wade through lengthy and dense technical reports (and quite frankly, should not have to do so in the first place) we have developed a *Policy Facts and Figures at your Fingertips* publication, a folder that not only summarises each DHS chapter on one page but also spells out, in a box entitled *Policy Notes*, what these facts and figures actually mean.

To increase accessibility, and with adequate resources available for national agencies to fulfil their duties, it is of great importance that data collected and information produced are efficiently disseminated and communicated (this is discussed later in this section). Also, agencies involved in the process ought to have a more pronounced customer (or client) and stakeholder focus, and an orientation more towards service than product; further, they ought to be guided by user-relevance and user-friendliness in all operations, rather than by tradition and *‘the way they have always done business’*.

There is no demand and or recognition from national government institutions and agencies

For data producers in the Pacific, the under-use and under-recognition of their potential contribution remains the greatest challenge. It translates into the low priority given to national statistical development in many countries, which then leads to low resource allocation every year. When statistical agencies really make concerted efforts to be more active in the dissemination of data and information, such as via targeted data user seminars, our collective experience shows that attendances are usually low and all too often, those sent to such workshops are junior officials, many of whom are not usually involved in data and policy analysis. They collect reports and other statistical outputs produced. When they return to their offices, these are duly shelved, and in many countries, that is the beginning of the end—or perhaps the beginning *and* the end—of data utilisation. Against this backdrop, observations that ‘*there are no data*’, ‘*data are not accessible*’ or ‘*data producers are not producing what users require*’ become more understandable.

When executing our latest joint project with UNFPA (2005–2007), we came across many national and civil society organisations continuously bemoaning that there are ‘no data’ who, when asked if they had consulted the NSOs, invariably answered ‘no’, many also indicating that they were unaware that such an organisation existed in their government. Most Pacific Island countries lack a culture of evidence-based decision-making so demand for statistics, development indicators and information is generally low. While education, information and general advocacy can assist in effecting a virtual culture change in this mindset, it must, like any meaningful development, come from within. Only when the use of data and information is seen as indispensable to standard business practice and good governance can we realistically expect an uptake in the use of statistics, and a growing demand for data and information. While a lack of demand for statistics is often linked to users’ perception that there are no data out there, or arises from users’ lack of the knowledge and skills necessary to interpret key indicators relating to their sectors, or persists because they lack the ability to link data and statistics to policy objectives and strategies, it is our experience that the single biggest bottle-neck is the lack of a political demand that sectoral briefs, policy papers, progress reports, project proposals and plans be based on evidence. This situation is unlikely to change unless first, such unsupported submissions are rejected with firm requests for factual rewrites and secondly, senior bureaucrats are held accountable for the dissemination and utilisation of data and information collected.²

Communication of results

Active dissemination of data and information is indispensable for any information uptake (Haberkorn & Jorari 2007). This can be done through a combination of different products and means of communication, including greater use of the media, and targeted at specific user audiences, Central to these efforts is the ability to ‘tell a story’ and to connect with the target audience. More strategic population advocacy and partnership creation play a critical role, with a special focus on national policy makers and politicians. This is an important means of creating demand for national statistics.

Population advocacy in the broadest sense is essential to policy success. Development policy and strategies address such matters as the impact of unabated high population growth on sustainable social and economic development, the impact of high rates of urbanisation on regional and rural development efforts, the urgent need to develop effective strategies to address the Pacific islands’ ‘youth bulge’—to name just three key population challenges the region faces. All have very little chance of success without widespread support, through civil society and the political sphere. The Pacific Parliamentary Assembly for Population and Development (PPAPD) created in 1997, and the UNFPA–SPC partnership in developing measures to integrate population into national and sectoral policy development and planning, are tangible expressions of meaningful population advocacy. Nevertheless, a step-up in pace is required, not just at the national level (through parliamentarians, as well as provincial administrations and town councils) but also, and most importantly, through concerted efforts in assisting policymakers and politicians actually to use the information received and translate it into action.

One has to recognise that in the Pacific as elsewhere, not all politicians have had the benefit of formal, tertiary or professional education, and hence do not necessarily have an appreciable understanding of statistics: the

2 A recent example of this lack of demand is that one of the DHS countries recently received 200 copies of its DHS Main Report and Policy Briefs more than 1 month ago. No customs clearance has been arranged since, and at the time of writing, the DHS reports and policy briefs for this country remain in customs storage sheds.

difference between numbers and rates, between rates and ratios, between estimates and projections, and so on. To counter this, data producers and analysts have to become more proactive in helping to make the changes happen, which may involve assisting in designing and administering population and development induction programs for newly elected parliamentarians, and providing ongoing population policy debriefs for current members. If it is possible to engage traditional leaders successfully in week-long workshops on conflict resolution and dispute settlement, utilising both indigenous and introduced techniques, one can envisage a more active population advocacy along similar lines, addressing population and development issues through countries' modern leadership, such as parliamentarians, provincial administrators and town councillors.

National statistical development policy

Finally, the formulation of a long-term national statistical development policy is paramount to ensure that many of the myths and challenges noted in this paper are minimised. In doing so, the data and information needs of key stakeholders are documented under a policy framework, spelling out timelines for specific statistical collections and how they tie in with the development of major national and sectoral policy documents and plans, identifying roles and responsibilities, and providing basic statistical benchmarks and meaningful targets. These policy frameworks would further include sector-specific action plans, including MOUs, detailing responsibilities of data producers and users, and would also contain provisions for ongoing monitoring of development progress in these sectors.

To ensure that data producers collect data and provide information that is useful to key users (such as a country's policy development and planning agencies, as well as key private sector agencies) producer–user committees ought to be established, to meet on a regular basis and advise on data collection and information management in general. For this to be successful, it is critical that these committees be ably chaired at the highest political level, preferably by a senior civil servant administratively removed from the ministry responsible for statistics, to safeguard institutional propriety at all times. These committees ought to advise on the broad spectrum of public data collection and information management.

In addition, to give data collection and analysis, as well as information management in general, the political clout and status they deserve in the wider context of policy development and planning, such national statistical development policies should also make provision for greater parity in status and pay between national statistical offices and other public sector agencies, including the provision of adequate resources commensurate with the expected outputs of NSOs. Sustainable technical capacity is of paramount importance, and national governments, regional agencies and their development partners must also recognise the provision of technical assistance and training in such policy frameworks as an ongoing commitment.

Concluding observations

A body of evidence is emerging, slowly but visibly, of a rise in awareness that taking a more strategic view of and investing in statistics has widespread benefits. This is illustrated in countries' willingness to develop long-term statistical development policy frameworks, as evidenced in Vanuatu and the Marshall Islands, with such documents in draft form also available for Nauru, Guam, Kiribati, Cook Islands and Niue. It is also reflected in growing commitments by some national governments to allocate realistic budgets to their NSOs, thus allowing them to undertake a regular program of statistical collection, as has been the case for some years now in Samoa, Vanuatu and the Cook Islands, and also illustrated in the recent announcement by Nauru's Finance Minister to double the budget of his NSO.

Last but not least, it is very gratifying, from the perspective of a regional producer and user of statistics, to see some development partners also beginning to take a longer-term strategic perspective, recognising the reality that data and information management is a key development issue and priority for many countries, and thus worthy of policy concern (and funding commitment) alongside investments in health and education, agriculture and infrastructure. AusAID's recent inclusion of statistics in their bilateral *Partnerships for Development* and their placing a greater overall strategic priority on statistics as a key development focus illustrate this new approach, which is tangibly reflected in its recent allocation of substantial multi-year funding to the SPC Statistics and Demography program to enable significant expansion of its capacity in providing technical assistance, capacity building and capacity supplementation to Pacific island countries and territories.

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The Economic Policy Planning and Statistics Office and the Republic of the Marshall Islands

Carl Hacker

In January 2003 the Economic Policy, Planning and Statistics Office (EPPSO) was established by Act to replace the Office of Planning and Statistics for the Republic of the Marshall Islands (RMI). A significant push factor for this was the negotiated extension of the economic provisions of the Compact of Free Association with the United States. The underlying feeling of the move was to set up an office with expanded expertise—not just with statistics and planning documents, but to include more economic forecasting and economic policy advisory services. Thus EPPSO was born, initially with three staff members to assist the new director. Among the three staff, high school education was the highest level of education completed. However, they were experienced, each having been in the office for 5–7 years and having received some technical training through the US Census Bureau and the Statistical Institute for Asia and the Pacific in Japan. The new director had primarily been writing grants in the Ministry of Finance, and this activity carried over into EPPSO for another year.

In 2004, the Environmental Planning Office was charged with carrying out a survey of Jenrok, one of the urban villages of Majuro, as part of a new solid waste project under the International Waters Program. EPPSO became involved with providing some advice on the framing of questions and selection of personnel to conduct the survey. This was EPPSO's first major foray outside of the office and into the field: until this time its work had been restricted to the Statistical Yearbooks and CPI reports and little else. Survey results were eye-opening—particularly with regard to people's attitude toward alcohol and demand for better government services—and led to discussion about the need to improve the survey questions and look at surveying a larger population, maybe across the nation.

During this 2003–2004 period, EPPSO first became acquainted with the Secretariat of the Pacific Community (SPC), which in the course of introducing Geographic Information Systems (GIS) to the region made a brief visit to the RMI. One of the EPPSO staff was also involved with web site development. This was the beginning of a new and strong relationship with SPC, particularly in terms of technical assistance. While this was occurring, EPPSO made a strategic decision to look to SPC as the main provider of technical assistance, instead of agencies from the US government. Much of this change had to do with cost and ease of access. Requests for technical assistance to SPC cost RMI and EPPSO nothing. Certain items were covered as part of the annual SPC work plan and if EPPSO's request fell under an existing program or project, SPC could meet the request quickly and at no cost. In contrast, grants were needed to access almost all technical services from the US government, which meant that proposals would have to be formulated and submitted, and answers awaited before programs or activities could eventually proceed in cases of successful proposals. The entire procedure was very cumbersome and time-consuming, and the US institution was not nearly as responsive as SPC. In addition, SPC *is* the Pacific; for the most part its staff are from the region and are familiar with many of the Pacific issues, such as national capacities. Because they were already in and of the region, it made sense for EPPSO to take more advantage of SPC programs.

EPPSO staff began by going to SIAP training provided through SPC. Four staff members participated in the month-long training sessions. This training, along with some training delivered by a local consultant (Ben Graham), started the deployment of CSPRO in EPPSO. In time, some refresher training before the advent of new projects has been necessary, but over time this training has been invaluable in developing EPPSO's survey capabilities. CSPRO training has allowed EPPSO staff to be quite proficient in many areas of its application and with the passage of time, EPPSO has been able to produce better and better data and with very good quality assurance. CSPRO allows for development of the survey instrument, construction of a data dictionary, compilation of results and reporting; it has proved a great tool. Over the last five years EPPSO has developed the capability to tackle most survey projects with a very high degree of confidence. In addition, EPPSO has moved far ahead with data processing: as a result of using CSPRO, EPPSO can handle almost all data processing functions, which in the past were almost always done in Saipan, Washington, DC or Manila.

In 2005 EPPSO submitted a proposal to the US Department of the Interior to carry out a Multi – sector Community Survey. This was approved in 2006 and some additional support was provided by the ADB. EPPSO was able to make very good use of local consultants, who managed the project and exposed staff to the logistics of taking surveys to the outer islands. There was some excellent CSPRO technical assistance provided by the US Census Bureau and staff members were able to learn a lot about editing and data processing. This survey was also one

of the first to be processed on Majuro and the first to incorporate GPS and GIS into the work, which eventually helped prepare the 2007 RMI Population Atlas. The end result was the production of seven survey reports on each of the communities of RMI, which produced some important social and economic data. EPPSO went ahead with a policy implications paper, but this was largely overlooked by the civil service and elected officials. As a result, addressing these issues, particularly the sections dealing with health and public health, will be much more painful and costly. On the capacity side, this project provided EPPSO staff with much practical survey and field work experience.

In 2003–2004 EPPSO and the ADB commenced a \$500,000 TA (technical assistance) package looking at strengthening policy development and statistics. One drawback was that statistics was not brought into the operation until very late in the project development. EPPSO was heavily into policy analysis, policy development and providing advice, before the question was raised, ‘but based on what data and/or information?’ One of the key areas was the need for economic data and statistics, for a variety of reasons, but the main driver was the new Compact of Free Association. EPPSO was fortunate to acquire a good economic statistician from New Zealand. Since 2005, EPPSO staff and now others in the civil service are taking classes in the Official Statistics Program that is offered by USP. Funding for this was obtained through ADB’s technical assistance. This is considered a great opportunity for capacity strengthening. In spite of these advancements, there remained a concern that almost all the focus and concentration was on economic statistics, rather than on health and education (that is, people) statistics. Given the financial circumstances under the Compact, there are some real questions that need answering about this perceived priority of economic statistics.

In January of 2004 UNFPA made a visit to EPPSO and talks began about the need for a Demographic and Health Survey (DHS), because there was little health data available for RMI. After the completion of the community survey in mid-2006, the DHS was scheduled for 2007. At this time, the use of these projects as a work-up for the next RMI Census (scheduled for 2009) began: it was satisfying that EPPSO could build up the technical and logistical expertise required to handle the development and implementation of a census on its own in the RMI. Though the DHS would play a major role in further development of EPPSO capacity, the inclusion of more people from outside the office, including citizens, would also now begin.

DHS work began with a series of training sessions, provided by the Australian Bureau of Statistics (ABS) and the SPC, on project management and development of the DHS budget and work plan. The project management training was a key development: it exposed EPPSO staff to the hard nuts and bolts of management and risk analysis, trying to make everyone aware about what would be required to pull this project off. This training was in half days, on two separate trips, for three weeks. This was one of the best training initiatives that EPPSO staff has ever participated in, and EPPSO is still realising the benefits today. The DHS was by far the most complex project EPPSO had attempted and completed. The original plan had been to use the same two local consultants again as managers but, due to some scheduling conflicts, it was left up to EPPSO. EPPSO staff came through with flying colours, the implementation of the project went off without any problems. There were no difficulties or problems with implementation in general and the data quality was very good.

Now that EPPSO has been building up a track record of experience as well as new technical skills and formal statistical education, what is happening? There were a few major developments with its staff that need elaboration. First, micromanagement is a bad habit in the RMI Civil Service: if the head is not around to direct people or issue orders, a kind of paralysis sets in. In effect, what was happening was that people were always seeking from their superiors permission to do what was, after all, supposed to be their job. This is not a good situation and in this respect, EPPSO was not any different. It took several years to get the message across to staff, that the mission or the goal is what needs their attention; they do not need to seek permission from the Director to do what is needed to meet those goals. They need to keep the Director in the loop, but EPPSO staff does not need permission to carry out the known tasks with a particular project or with routine EPPSO work. Managers have to be able to let the staff do their job, just as they also have to realise that mistakes can and will be made, but these can be seen and used as opportunities to learn and move forward. Again, this is an insight that is generally lacking in the civil service. This approach helps create leadership, initiative and above all problem-solving behaviours. At the same time, the technical training and education has also been paying off because it has helped develop the self-confidence people need to carry out their responsibilities in an effective and efficient manner. Consequently, fear about micromanagement, fear of doing a ‘bad’ job, fear of getting scolded—these things have evaporated for the most part. As a result, there is little need for any micromanagement because staff know they have the support of the director; having acquired more knowledge

and education has increased confidence—again reducing fear of the unknown and boosting the ability to ask the right questions when problems come up—building up an environment of learning, leadership and problem solving. These developments have helped transform the EPPSO office. Unfortunately, persuading other parts of the civil service to take a look at how EPPSO does things, much less to take notice and perhaps emulate, is another problem altogether. Old bad habits die hard.

Where does this leave EPPSO now? There are still many areas requiring improvement; for instance, how to disseminate information better, and how to encourage agencies and ministries of the government to produce and release quality data and information in a timely fashion, producing more evidence-based policies and programs. This is of particular importance in areas of performance budgeting, fiscal planning and management, and overall economic management. The most critical need, however, is with our social sectors—education and health. EPPSO staff can tackle many projects that were once done by off-island consultants and the quality of the work is generally excellent. Nevertheless, a major weakness that needs attention is analysis and the production of reports and papers. Nor is it only that EPPSO that has seen improvements over the years. Many more people throughout the civil service are now working with things like statistics and performance budgeting than ten years ago. There is much more information being produced and used than ten years ago and there is a pipeline of people involved with formal education in official statistics and soon, it is hoped, with MBA degrees offered on-island. This is a good foundation for further development in other activities like operational/strategic planning, program and project development and performance budgeting. The end result of the creation of an environment with greater accountability and more evidence-based decisions is not impossible—if there is the leadership to keep moving in this direction.

The last item to be considered is that of staff turnover. This is an issue that has not been a major cause of concern, so far. Over the years EPPSO has lost one staff member to Foreign Affairs and one more to educational leave. The rest of the office has been working together since 2003 and earlier. The key item was how to use the Official Statistics Program as a pipeline, or insurance policy, in that by having people in the training pipeline we could redress personnel losses much better than before. This allows for a cadre to be developed and spread through the government, making it easier to replace people who migrate, go to school, quit or are reassigned. For small countries and offices, this type of foresighted mitigation is the best way to try to keep statistical work moving forward, rather than engaging in hand wringing over the loss of staff or doing little in any meaningful way about staff training and development.

Some implications for improving statistics and evidence-based decision-making: the point of view from a small statistical office

Health statistics

The IMF, ADB, PFTAC, WB and USDOJ all review financial data regularly. This keeps the Ministry of Finance (MOF) and EPPSO on their toes and undoubtedly helps to ensure quality, but RMI also desperately needs this same level of attention and focus on its health statistics.

During the April 2009 regional meeting looking at different methods for future improvement of Pacific Statistics, health statistics were second to economic statistics in terms of relative importance yet they show significant problems of data gaps, timeliness and quality, implying that they are but a poor second at best. During the last six months of 2009, EPPSO has seconded its MDG UN Volunteer to work with the Health Ministry on data and statistics. The work over the last several months has revealed some severe challenges with our health data and health statistics and this is affecting national health outcomes and national health planning in a significant way. Recent work has brought to light significant findings in the areas of immunisation, vital statistics, maternal mortality, infant mortality, TB surveillance, leprosy, cancer, public health services and reproductive health, to name but a few categories. There is a clear need for more and better training in health administration, hospital administration and health statistics.

If WHO, UNFPA, CDC, USHHS and/or USDOJ were to apply the same level of scrutiny to our health ministry as others apply to our finance ministry, RMI would be in a much better position with regard to its health data, planning and outcomes. With so much of its annual budget essentially guaranteed (at least until 2023) the amount of focus and attention displayed toward RMI's finance and budget data is excessive. The case can be made that on a day-to-day basis, the impact of the Ministry of Health on RMI households is much more profound. RMI

has rarely been shy about spending serious sums of money, both domestic and donor, over the past several decades for the services of consultants and people from off-island to help with finance and budgeting matters. RMI now needs to do the same with a concentration on capacity development in both health administration and health statistics. In this area of national development, people need to be more of a priority. The excessive concentration of effort on budget and finance has come at the expense of households and of people: this deficit needs to be reversed and brought into a better balance.

This leads to the next question: what do we need to do to make attention on health statistics and people more of a reality?

ABS/SPC DHS Project Management Training

The training in project management provided by the ABS and SPC was a key ingredient for capacity building for the DHS project, essential for providing understanding of timing, budgets, resources, organisation, self-confidence, leadership and of course, project management. In many cases, upper and mid-level management face real limitations in their understanding of official statistics, with a resulting impact on service provision and conditions in the field. This situation produces a real need for project management training combined with statistics training, a type of training that should be considered a must for all project and program managers. In fact, it needs to be institutionalised in some way, so that this is a regular feature in management capacity building.

This tells us that we need to develop different and more modern approaches to HR development in managerial and technical areas. Saying this is not to deny that funding resources and a reconsideration of priorities in the capacity building, training and education budgets are an issue. Still, too much attention is focused on doing the same old things in the same old way and getting the same old results. This is not satisfactory and most importantly, it is not producing the development results that can be seen to be needed on the ground.

What are some other practical things we can do in further developing managers and statisticians?

Mentoring of younger people

The mentoring of younger people at both the College of the Marshall Islands (CMI) and the University of the South Pacific (USP) in Majuro has, to date, been informal. Young people are showing much interest in available programs so the mentoring could well be more formalised. We need to see what is possible within our budgets, time or other resources to try to work with younger people who have interests in the areas of statistics, policy analysis or finance/budgeting. Engaging these younger people in projects, such as the recent Water Survey, can produce beneficial results for all involved. Particularly enlightening for the young people involved in that survey was the revelation of the very real relationships between people, numbers and policy. It proved to be a powerful learning and experience building tool indeed.

Internships focusing on statistics and performance budgeting

Over the years, the possibilities of internships in statistics and performance budgeting have been discussed with the ADB. Having one intern in post for one year would cost the equivalent of one (or perhaps two) consultant-month(s). In a longer-term view of capacity development, this would seem like an extremely attractive avenue for developing and professionalising future technical staff for the civil service. Professional development after graduation from college is not something that is being done. Typically, a student hired right out of college or university is thrown into a line position, which makes it all too easy to develop bad habits and bad attitudes. A practical approach is to allow novices to learn the practical techniques and methods before being given significant responsibility. Let them have time to complete a demography course, a GIS course, regional technical workshops or other training, to learn about some of the different reporting processes and methodologies that are needed for success. Such trainees, when thrown into the fire of the agencies or ministries, would be much more likely to contribute directly with skills and ideas than is presently the case.

2009 – Energy and water surveys – EPPSO continues to build

This project is part of an EU disaster mitigation program administered through SOPAC (Secretariat for the Pacific Islands Applied Geoscience Commission). As a result of this project EPPSO has updated house listings

for 70% of the RMI population, digitised on GIS. This means that whenever the next Census goes forward, the house listings will need only a minor adjustment. The digitised maps are a first for this type of work and have updated the seriously out-of-date images that were being used. During these projects EPPSO has used as many people as possible from earlier projects so that there is now a skilled and trained cadre of surveyors and supervisors. Once more, this is largely a product of the DHS and the leadership of EPPSO staff. The tables from the Water Survey have just been completed, but the next task is to relate household stories and faces to these numbers, so we can talk about babies, kids, moms, dads, grandparents. In this way we will be able to demonstrate persuasively that the issues and problems are real and that some attention and resources are needed. EPPSO is using an approach first used in 2002 during ADB's Participatory Poverty work, where individual stories were used to illustrate what some families were dealing with on the day-to-day level. This is important as we need to grab the attention of elected officials and donors so that more effective use of resources and programs can help alleviate some of the very serious issues with public health that are facing RMI.

As a result of this Water Survey project and previous projects, younger people are evincing a growing interest in surveys and statistics; showing the connections between numbers, people, problems, outputs, solutions and outcomes is very powerful with many young people, raising their interest in finance and statistics. Statistics and GIS Education have produced results, most recently with the Water Survey. Making the numbers talk and work for people means developing practical and workable solutions! Education and training have had a dramatic impact, vastly improving staff confidence, initiative and problem solving, leading to a greater understanding about the implications of stats for policy and people.

Medium- and longer-term results need to receive more attention, with less distraction by angst about shorter-term results. This refers to the use of a real internship program that can impart many of the practical and professional skills required for success in technical positions. But managers also need to be willing to use mistakes and failures as learning tools for moving forward; much can be gained as a result. Do not be afraid to fail; accept that it is going to happen sometimes. Easier said than done, granted; on the other hand, doing the same old things in the same old way is continuing to take us in the wrong direction.

Marshallisation of work

The general public and policy makers have increasingly been recognising the importance of an effective and credible 'Marshallisation' of planning, research and analytical work in RMI, though admittedly it would not be possible without assistance from SPC, PFTAC, USP and ADB. The production of the excellent ADB socioeconomic report, *Meto 2000*, was discredited because of controversy over a few lines in the report. The fact that it was written by somebody from off-island made it easy to toss the report aside. Thus the excellent analysis and recommendations were simply ignored. When planning for the next ADB socioeconomic report opened the year in 2003, the decision was made to try to include as many people from the RMI as possible in the research and writing of the report—to try to immunise the report against the reflexive responses that wrecked *Meto 2000*. To a large degree this approach has had some success. The 2005 report, *Jummemj*, was not dismissed like *Meto 2000*, although serious attempts were made to do so. The fact that all but one of the contributors were Marshallese made a difference. The result was a document whose contents were discussed for over two years, something we have not seen before. Policy uptake based on evidence, data and statistics is still a major concern. There is still little effective demand, but there is more informed policy discussion in many areas. If one takes a longer view, comparing, say, to 10 years ago, the data environment is much better, but there is still far to go. Over the last several years the growth and increasing activity of the NGO sector has increased the demand for more information. Also EPPSO and the NGOs readily share and request information as well as trying to support programs and projects of local and national interest. Continued development of growing numbers of Marshallese trained and educated in areas of policy analysis can only improve the prospects for national development and improved governance.

Official statistics and performance budgeting

More agencies and ministries are looking at statistics and performance budgeting issues and participating in the USP Official Statistics Program (currently there are 16 participants and 12 new participants are being sought for the program). More discussions both locally and with donors should ensure that funding is available for this critical program of capacity building. The one major item we need to try to include in the Official Statistics Program is some courses in basic biostats or health-stats. While EPPSO has assisted almost all agencies of

government with performance budgeting, institutionalisation of the process and the reporting is difficult. A major issue in this area has been convincing the Ministry of Finance to implement performance budgeting government-wide rather than just with Health, Environment or Education. But, as mentioned, bad old habits are hard to kill and cajoling people over their fear of the new or different is difficult. As a result, only now, after five years, are we beginning to see a shift. There is need is to refocus attention on outcomes and performance rather than on compliance, particularly with audits, because the effect of compliance on national development or program improvement is negligible. Carrying out performance audits and combining them with performance budgeting would make improvements in our national development indicators far more likely.

One of the things that can be done at both regional and country level is talking with the World Bank and the OECD about utilisation of the Trust Fund for Statistical Capacity Building. One interesting national development item is the consideration of statistics development planning as a separate sector in national development plans. The logic is simple: when developing these sectoral and national development plans with monitoring and evaluation frameworks, it makes sense to explain and plan how this will happen. Agencies and ministries need to be able to monitor their own performance, produce indicators and data. How will they do it? What is the plan for training and development in these areas? Combined with the development of National Statistical Development Strategies (NSDS) there are some ways to move forward. If there are serious intentions in these two areas, support from this trust fund is a possibility. There would be other options also possible through the various organs of the UN, the ADB or bilateral donors.

People do care

Many of our younger people need opportunities and need enlightened support from their management to improve, grow, succeed and ultimately run the government in future years. But this will not happen unless there is an increased and more consistent higher-level recognition of this need as well. Education, training and capacity development require time, realistic assessment of future needs, evidence and the resources so we can develop and make these professional development opportunities more readily available. People do respond to signals—if we are sending out the right signals—in the areas of training, education, meritocracy, management and accountability. There is no doubt in my mind about what we will be able to do, because we have among us right now people who have already made and who can and who will make a difference in the future.

Discussion

- There was a lot that happened at Cairo (ICPD), there is still cause for solid feminist research. It is not that we don't have the knowledge, when you collect macro level data you get macro level knowledge. Data is simply the systematic collection of ways of understanding what is happening on the ground. We should also think about other forms of data. We have a lot of micro level data in the Pacific. There is a lot of difference between having knowledge and learning from that knowledge, understanding the processes.
- We all know about the importance of good, timely, data. One of the results of having good accurate data is that governments' performance in national strategies and plans can be monitored and judged by the population. The output of the Fiji Bureau of Statistics has been fantastic, but there are other offices that don't want to release data, there are some governments that don't want to have good accurate data available. What should be the response of national statistics offices to governments that don't want to release data to the public?
- I'm not sure if Cairo (ICPD) is quite dead or just in long hibernation, and I see a quiet death in several program of action policy points which have never been picked up, not enacted after Cairo and not in the MDGs. The problem with that is that many Pacific Island governments have told ministries of finance and directors of planning that this (ICPD) is not a policy priority, we are focussing on the MDGs. Migration is one of the key dynamic population points in the region, internal, international and in regard to urbanisation. It is not mentioned anywhere, it has not been acted on after Cairo, it has not been in MDGs. Governments take that framework as an excuse for not doing anything. In terms of economic significance, at a recent meeting of Pacific ministers of finance it was said that 58 per cent of the GDP is from remittances, and this is only those that can be tracked. Including those that come in as clothing and household goods to be sold in the market, it could be as high as 70 per cent. To ignore migration as a population concept in future is negligent.
- We haven't learnt anywhere fast enough. One of the challenges in the health information area is produced by technology. People buy fantastic new computer systems thinking they will solve all the problems, but the problem is that it doesn't work. You've got to actually train people, not just to look at tables that mean nothing to them. We haven't done anywhere near a good enough job to train managers to use information. It is a significant gap, I'd say internationally.
- Consultants come and go, but we make sure the skills remain. People should be aware we don't give up so easily.
- There is legislation that doesn't allow distribution of certain information, confidential data. At times we produce only the main reports. If consultants want to further analyse the data, they should be capacity building also, because we spend a lot of money on consultants and collecting data that should be utilised.
- Is there political interference in what survey questions are asked, is it an issue for data collectors?

I have not heard of any Pacific Island country where there was any political interference in the design of a survey or census. Government has a right to ask for certain questions to be included in census, but I haven't come across questions being stopped. I have come across only a couple of cases in 27 years of governments slowing down the release of information from the census, for obvious political reasons, which is not unique to the Pacific. There has been agreement brokered between three Pacific countries' statistics offices and an international data user to allow access to undertake specific analysis for a project using confidential data. This is a very nice start, a good sign of things to come.

Plenary 9

Urbanisation: fertility, housing, education, health, environment

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Keynote address

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Pacific urbanisation and its discontents. Is there a way forward?

John Connell

During the past few years the South Pacific territories have undergone rapid and large-scale urbanization. A steady stream of migrants has been flowing from the rural areas into towns that are, for the most part, ill equipped to absorb the newcomers, to house them and to provide them with the basic necessities of life. (South Pacific Commission, *Regional Seminar on Health and Social Planning and Urbanization*, 1970, p. i)

Urbanisation in the Pacific must be seen in the context of a range of now familiar and widespread national development challenges in island states that are constrained by the limits of small size. Well known influences include: remoteness and isolation (resulting in high transport costs to markets, and more costly tourism), diseconomies of scale (because of small domestic markets), limited natural resources and a narrow production base, substantial trade deficits (because of dependency on metropolitan states), few local skills, vulnerability to external shocks and natural disasters, and a disproportionately high expenditure on administration and dependence on external institutions (such as banks and universities) for key services. Moreover, political systems have sometimes been fragile, ecological structures are vulnerable and economies lack diversity. Small islands, a paucity of natural resources and remoteness, even within countries and territories, have hampered the ability to compete in the global economy. Consequently island states have traditionally specialised in a narrow range of agricultural exports, such as copra and coffee, while seeking to develop niche economies. Export diversity in the Pacific region is less than in any other world region. Island states are particularly vulnerable to natural hazards, and in the past decade different parts of the region have been badly affected by tidal waves, volcanic eruptions, droughts and cyclones. Set against this range of disadvantages, the comparative advantages of smallness and isolation are few, other than the retention of a degree of cultural integrity.

Although the region does not suffer from the absolute depths of poverty experienced in some parts of the developing world, it does have serious social and economic problems (Abbott & Pollard 2004), and poverty is rising. Generally, growing populations have intensified pressure on lands and seas. Economic growth has been disappointing since independence, usually about twenty-five years ago. Political instability has increased, most evident in the so-called Melanesian 'arc of instability' from Papua New Guinea (PNG) to Fiji, where there have been recent episodes of sustained violence, linked in different places to inequality in access to resources, especially land (sometimes in peri-urban areas), that have sometimes taken ethnic form and resulted in external interventions.

One consequence has been the growing and increasingly ubiquitous significance of migration, both internal and international. Small and vulnerable South Pacific states have become irrevocably a peripheral and dependent part of a wider world. The life courses of island people, present or absent, rural and urban, are increasingly embedded in international ties, and island states have sought out new migration opportunities. Island states, individuals and various international agencies have attached new and increased significance to migration, remittance flows, return migration and the role of the diaspora, in contexts where 'conventional' development strategies have achieved limited success. It is part of a new outward urge.

Stagnating economies have made the tasks of governance considerable especially as urban populations and expectations both increase. In most urban centres services are inadequately supplied and do not always extend beyond the formal housing sector. Rural services have also sometimes been curtailed and delivering services, and skilled workers, to remote areas has become problematic, especially in Papua New Guinea, where rural services (whether in health, education or transport) tend to be worsening rather than improving. Rural transport infrastructure has sometimes worsened and rising petrol prices have made access to urban markets and the delivery of rural services more costly (Connell 2010). Public funding for health services has not caught up with demand, and is drifting away from it, in part because there are inadequate numbers of health workers, especially in Melanesia. Inadequate rural service provision has stimulated rural-urban migration.

Although most countries have high literacy rates and high levels of school enrolment, in the Melanesian states access to education is limited and literacy rates are low. In Solomon Islands, for example, only 39% of the

population have access to primary school education (though that percentage is higher than in Papua New Guinea), and there as elsewhere in Melanesia particularly, school leavers have limited skills. Similarly in the Marshall Islands school leavers tend to be so poorly educated that they are unable to be employed in semi-skilled occupations, so that local unemployment accompanies migration of semi-skilled workers, such as electricians and plumbers, from overseas (Chutaro 2005). Trade skills are lacking in many parts of the region. However, not only is there a limited extent of formal employment for which high skill levels are relevant, but the entirety of formal sector employment is small and incapable of absorbing more than a small proportion of school leavers. For example, in Kiribati the formal sector is estimated at only 21% of adults, and often these individuals have to support large households (ADB 2002). Only around one-quarter of the 2000 annual school leavers could hope to find full employment there, and broadly similar situations exist elsewhere. The content of educational curricula is therefore important.

Until quite recently, urbanisation in the Pacific was viewed positively. In Papua New Guinea, where urbanisation was relatively late, towns were seen on the eve of independence as centres of national social, economic and political development: nothing less than ‘crucibles of nationhood’ (Ward 1970). In some respects they still are but the crucibles can boil over. There were then few urban problems and no real hostility to urbanisation in the region. Over time attitudes to urbanisation have hardened, through prejudice against squatter settlements rather than any idealist vision of rural development policy, and as towns have displayed evident problems of development failure. Without effective urban policies, and also corresponding rural and regional development policies, environmental, economic and social problems have tended to worsen. This overview seeks to examine recent trends in the urban Pacific and focuses almost entirely on urbanisation in the independent states. It cannot be comprehensive because of the dearth of data in many critical areas.

Urban growth

In almost all Pacific Island countries a significant demographic, economic and cultural transformation is taking place as urban populations are growing faster than total populations. However, in most countries the rate of urban growth is not much faster than that of the nation as a whole (Table 1), suggesting that migration may not be the most important component of urban growth. If Papua New Guinea is excluded, more than half of all Pacific Islanders now live in urban areas, reflecting a global watershed heralded by the United Nations in 2007. In some countries—such as the atoll states of Kiribati and the Marshall Islands—this growth has resulted in exceptionally high population densities, comparable with those in the most densely populated Asian cities. The densely populated Jenrok district of the Majuro urban area has a reported population density of 230,000 per square kilometre (Chutaro 2005), compared with 6,400 in Hong Kong. Where urban areas still account for a minority of people, such as in the larger Melanesian states—Papua New Guinea, Solomon Islands and Vanuatu—urban growth rates are amongst the highest in the region, foreshadowing a late though probably inevitable urban revolution. Though migration still drives this growth, especially in Melanesia and to a lesser extent Micronesia, an increasing share is generated by birth rates of second- and third-generation urban residents, indicating the permanent shift of many Pacific Islanders from ‘traditional’ rural life and contradicting the sometimes still held view that migration is temporary and urban challenges can be met through rural development. Unmistakably the Pacific faces an urban future.

The recognition of these urban realities, by both Pacific Islanders and outsiders, has been slow and this has arguably weakened effective responses. Emerging problems of poverty, urban management, environmental degradation and security are evident throughout the region yet with limited policy attention. As the former President of Fiji, Ratu Sir Kamisese Mara, forewarned over a decade ago:

It does not require any great genius to figure out the consequences of this urban drift. Quite apart from the basic strains placed on limited infrastructure, we have seen an erosion of cultural values, growing unemployment and the attendant restlessness, increased crime and other ills which plague large urban centres . . . But in our case we have the additional constraints of limited resources, small land areas, isolation caused by distance and the consequences of the great social and cultural changes wrought by the new realities that our traditional ethos was not equipped to handle. (1994: 9)

All such negative changes have become widespread in the Pacific, but alongside these problems many cities remain and will continue to be key centres of economic growth, tertiary education and technological change.

Table 1 Pacific urban and national population figures

	Last census	Population at last census	Urban population %	Annual intercensal growth rate Urban/Rural
Melanesia				
Fiji	2007	837,270	51	1.5 / -0.1
New Caledonia	2004	230,790	63	2.5 / 1.0
Papua New Guinea	2000	5,190,786	13	2.8 / 2.7
Solomon Islands	1999	409,042	16	4.2 / 2.5
Vanuatu	2009	240,000	23	4.0 / 2.2
Micronesia				
FSM	2000	107,008	22	-2.2 / 1.0
Guam	2000	154,805	93	1.8 / -1.4
Kiribati	2005	95,448	44	1.9 / 1.8
Marshall Islands	1999	50,840	68	1.6 / 1.3
Nauru	2006	9,233	..	-2.1
Northern Mariana Islands	2000	69,221	90	3.7 / 2.3
Palau	2005	19,907	77	0.0 / 3.9
Polynesia				
French Polynesia	2007	260,000	51	0.7 / 1.8
Samoa	2006	181,000	21	-0.8 / 0.6
Tonga	2006	102,000	23	0.5 / 0.4
Tuvalu	2002	9,251	47	1.4/-0.2

Source: based on Pacific Island Populations 2009, Secretariat of the South Pacific Community.

The rationale for urbanisation and increased population concentrations is consistent throughout the Pacific: employment opportunities and services (especially education and health) are concentrated in the urban centres. Urbanisation is proportionally least in Melanesia—though towns and cities are larger—since modernisation has been belated. Even in the atoll states of Kiribati, the Marshall Islands and Tuvalu, where urban economic development is weak, urbanisation has become significant and development problems have resulted. Almost everywhere, urbanisation has been accompanied by rapid population growth (heightened through the limited impact of family planning), with the result that natural increase has become as important an influence on urban growth as rural-to-urban migration. These influences are discussed below.

While urbanisation in the Pacific has been historically late, growth in the past half century has been remarkable. As late as 1960 only Suva and Noumea within the colonial Pacific had populations of over 25,000; hence the expansion of urbanisation is a dramatic and very recent change in the history of the South Pacific. For Melanesia on the eve of independence cities were still described as 'still essentially communities of migrants' (Brookfield with Hart 1971: 384). Today the respective populations of Suva and Noumea are estimated to be 250,000 and 160,000. Belated urbanisation was in large part a result of deliberate efforts to deny indigenous populations access to what were essentially European urban enclaves. Legacies of segregationist attitudes still linger in contemporary urban settings, evident in elite and government hostility to squatter/informal settlements and the informal sector, and also through the denial of services and infrastructure to those not seen as 'belonging' to the modern city (Connell 2003b; Storey 2003). Rapid urban expansion mainly followed postwar and, later, post-independence expansion in government activity and spending, and with it came a boom in bureaucratic job opportunities for the educated elite and skilled workers.

Even official statistics may hide the real growth of cities. While Port Moresby's official population (based on the 2000 census) is recorded as 254,158 this excludes a large number of peri-urban and informal settlements. Most government planning agencies in Port Moresby estimate that the city's current actual population lies closer to 500,000 than official projections of a little over 350,000. These wide estimates of populations alone are indicative of the limited knowledge of many aspects of urban life. Similarly recent growth in Port Vila (Vanuatu) is mainly outside formal urban boundaries, and in several smaller states, such as Samoa and Tonga, but also in the Markham Valley outside Lae (PNG), there is significant commuting. What amounts to urban undercounts exist in many Pacific countries and have serious implications for infrastructure and service provision to rapidly growing urban populations.

Demographic transformation? A population context?

All states in the region are going through the demographic transition hence the idea of a 'doomsday syndrome', prevalent a decade ago and especially traced to Melanesia (at the time seemingly facing explosive growth rates) is now a thing of the past. Nonetheless, population growth rates remain high in some states. While the average population growth rate is around 2.2%, in Vanuatu and Solomon Islands it is around 2.7% though in both states it is probably falling. In several states, such as Fiji, Tonga and Samoa, growth rates are, however, less than 1%, partly because of high levels of outmigration. Here as elsewhere there are very great differences within the region, but only in Melanesia is high fertility a significant influence on the rate of urbanisation.

Total fertility rates remain high, partly because contraceptive use is low, especially when compared with the situation in other developing countries at similar income levels. Fertility control is a taboo topic in public discussions in most countries. Throughout the region there is no indication that contraceptive use rates are anywhere above 30 per cent, and may be as low as 3 to 4 per cent in Vanuatu and Solomon Islands. Many reasons explain the limited response to family planning, including the availability of children to perform work (especially in their parents' old age), children's potential to be income-earners, the desire and necessity to please husbands, the intrinsic need to produce and rear children and limited access to family planning services. Throughout the region family planning programs have largely been tokenistic, partly because of religious deterrents.

Life expectancies have generally risen slightly over the past quarter of a century, but remain lowest in the Melanesian states. Infant mortality rates are also highest in Melanesia, with Papua New Guinea and also Kiribati (at 88 per thousand) being the worst of the region. In Papua New Guinea there is evidence that the infant mortality rate is actually increasing, largely because of inadequate, and declining, provision of health services to rural areas. High mortality rates have only slightly dampened the rate of urban growth.

Although prolonged rural–urban migration, increasing pressure on land and urban services, rising youth unemployment, social discontent and high levels of maternal mortality all contribute to a more favourable climate, developing and implementing population policies has proved difficult. The factors that are most conducive to successful population policies—integration of population and development policies, improved rural development and communications to spread new values and reduce the economic significance of children, formal sector employment opportunities for women of increasing age of marriage—are usually absent. In some places, including Tuvalu, the possibility of migration has actually encouraged high rates of natural increase; at the household level, on Nanumea atoll, 'parents actively hope to produce remittance earners and most feel that this necessitates having more than one son [one of whom] will be our road to money and imported goods'

(Chambers 1986:283–4). The outcome of high population growth rates has been that in most states there is a preponderance of young adults in the population—a youth bulge—that has placed strains on land resources, but also on employment markets, education and social organisation. A critical development issue throughout the Pacific is that of maintaining, let alone improving, present standards of living in the face of continued population increase.

In certain localised contexts population pressure on resources is perceived as a growing problem. In several areas where population pressure on resources has created tensions, land is not freely available, but zealously guarded by its traditional owners. In Solomon Islands, for example, recent conflicts around Honiara were in some part a consequence of Malaitans leaving their own densely populated island and settling on the land of the local Guadalcanal population, who resented the loss of their resources (and the greater competition for scarce urban jobs). More generally the relationship between migration, population pressure on resources and political tensions is much more complex.

In most states an epidemiological transition towards ‘lifestyle diseases of modernisation’ (non-communicable diseases or NCDs), such as cardiovascular diseases and cancer, has imposed major burdens on urban health care resources, since they are more costly to treat, posing a dilemma for resource allocation. These trends have been exacerbated by urbanisation: a more sedentary life, combined with increased alcohol and tobacco consumption and poor nutrition, in contexts of inadequate education and housing, lack of access to clean water and sanitation, overcrowding and poverty (e.g. Connell 1997b, Calvert-Faamoe et al. 1997). Some of the worst health and mortality problems are experienced in the growing urban settlements, especially in Port Moresby and the urban areas that have been established on coral atolls (Connell & Lea 1992). In Majuro (Marshall Islands) ‘hospitals are inundated with people with lifestyle diseases and therefore scarce financial resources are diverted from preventative health care programs in the Ministry of Health’ (Chutaro 2005:40). The spectre of HIV and AIDS now threatens the region, and in Papua New Guinea it has already become a generalised epidemic with a rate of 1%; although no other state approaches these levels there is growing concern over future trends, especially in urban areas (see below).

Internal migration

The movement of people within and between islands has gradually intensified in volume, increased in distance, and over time become more complex in pattern and purpose. Urbanisation has become more permanent. With the development of modern transportation, the continued stagnation of rural economic development, and the increasing significance of urban economies in globalising spaces, the opportunity for and logic of migration has increased in a region that has historically been characterised by high mobility. Whereas in the past migration tended to be circular or repetitive, often seasonal and over relatively short distances (for example, to plantations), permanent and relatively long-distance migration has, in recent years, become a more general feature.

Throughout the Pacific there are some general trends in population movement, although not all are necessarily present in any one state. First, international migration extends beyond the region; second, small islands are being depopulated as people move to large islands; third, mountain populations are moving to lowlands, usually along the coast; and fourth, urban populations are continuing to grow. In the past quarter of a century these trends have intensified and been accentuated to the extent that it is no longer possible to regard the Pacific as characterised by rural populations. Internal migration, almost always to cities (except, unusually, where there are developments such as mines or oil palm settlements) parallels and sometimes leads into international movements (see below). National populations have become increasingly concentrated on the more central or larger urbanised islands, such as Tongatapu in Tonga, Upolu in Samoa, South Tarawa in Kiribati, Funafuti in Tuvalu and Efate in Vanuatu. This has tended to exacerbate problems of service delivery in remote areas, which in turn has accentuated and accounted for further movement away from isolated areas.

This has been well described for the Marshall Islands, which has 28 populated islands, but where it has been estimated that by 2023 at least 85% of all Marshall Islanders will live on either Ebeye or Majuro, two of the most densely populated islands in the world.

It is not surprising that migration is increasing every year from the outer islands. People from the outer islands are searching for better jobs, better access to education and health services. This has compounded overcrowding in the urban centers coupled with rapid population growth. These trends are unlikely to change unless substantive incentives are promoted and improvement to basic services in the outer islands is done. The future sustainability of outer island

communities will now be in question if this trend of migration continues at the present rate. The cost of providing these services to the outer islands will undoubtedly rise exponentially due to low populations in the outer islands. (Chutaro 2005:40)

Similar extremes of outer island depopulation exist in Palau, but are not universal, and in other parts of the region, such as Solomon Islands, where remittances flow from the centre to the periphery and retention of traditional cultures has been more common (Connell 2010), there are some prospects for turning the tide.

The depopulation of remote islands is widespread in the Pacific, though only two islands have been entirely depopulated since the nineteenth century (Connell 2010). Employment opportunities and services (especially education) are concentrated in the urban centres. Where manpower and capital are often limited, centralisation is inevitable at some scale. Urban bias characterises most service delivery, to the extent that an inverse care law characterises the provision of medical services (Connell 2009). The more educated have tended to migrate first and migrants have left many rural areas to take advantage of superior urban educational and employment opportunities. As in Palau, educational systems create disdain for rural life because ‘the exclusion of traditional skills and knowledge from westernized school curricula in many developing countries amounts to a constant tacit assumption that such things are not worth learning’ (Johannes 1981:148). In Blacksands settlement (Port Vila) some seven per cent of families had moved there simply for better education for their children. Yet, though many had achieved it, some were forced to send their children back to the village for education, as urban schools became full. A few families dismissed education, believing it no longer offered a guarantee of employment or the opportunity to improve living standards. Such families were usually financially disadvantaged and with little education (Mecartney 2001) hence the restricted access to education for their children was likely to perpetuate and accentuate the structure of uneven development. While there is some feeling that urban second generations may do better, through superior access to education (e.g. Koto 2008), where educational choices are limited and job opportunities few, that optimism is often unwarranted.

Socio-economic changes in many rural areas have raised expectations but also enhanced inequality. Income distribution is poorly recorded in most countries but undoubtedly uneven at any scale. In the not untypical village of Paonangisu (Efate, Vanuatu) in early 2007, for example, substantial income inequalities existed (between, for example, households with stores and some access to urban remittances, and other households with income only from sales of agricultural produce). These inequalities were reflected in different patterns of purchase and ownership of goods (including permanent houses and vehicles), food consumption etc. (Connell 2010). Such differences, with consequent tensions, are becoming more common at village level and a reason for migration. Though a handful of islands, such as Pentecost (Vanuatu) and Kadavu (Fiji) have benefited from the local significance of kava marketing, tyrannies of distance have disadvantaged economic enterprise. In Paonangisu village, again, barely 50 kilometres from Port Vila, rising petrol prices have made it five times as expensive to market produce in the capital city as it was in 1976, while returns from crop sales have barely increased.

In most Pacific countries earning power is increasingly concentrated amongst urban bureaucracies, while the absence of developed state mechanisms (such as progressive taxation, unemployment benefits, pension schemes and other forms of social protection) for effecting transfers of income minimises redistribution towards rural areas other than through personal remittances. Ultimately an economic rationale, real or latent, underlies most migration moves. In the Blacksands (Port Vila) and Ivane (Port Moresby) squatter settlements most migrants had arrived for employment, and others for the superior education that might secure them a good job in the future (Mecartney 2001; Vavine 1984). These settlements are probably typical. Simply stated, in Port Vila, one of the most important reasons was ‘*long winem smal watu from no gat rod long winim watu long aelan* (to earn a little money since there’s no way to earn money on the home island)’ (Mitchell 2000 :172). For many that is reason enough. Migration of the young to Koror has been summed up by one Palauan as the three Es: ‘employment, entertainment and education’ (Rehuher 1993:21), a not uncommon situation. Growing inequalities, coupled with rising expectations, are the concomitants of increased migration.

Within the Melanesian states especially, remittances from urban to rural areas continue to play an important role, especially where migration is from small islands, such as Ponam or Ware in Papua New Guinea. However, even for remote parts of such large islands as Tanna (Vanuatu), remittances from urban migrants are the single largest source of income in several villages (Winthorpe 2004). Nonetheless, in many situations there is inadequate information on remittances and their use, and hence on their real and potential contribution to domestic incomes and economic development, their influence on social change or continuity and their ability to constitute a form of ‘safety net’.

In the immediate post-independence era, the number of white-collar, and similarly prestigious, occupations increased considerably, especially in urban areas. That expansive phase has ended. Expansion of education has trained more people to be able to take up urban jobs, and expectations are rising but employment crises in many urban areas, growing populations, inflation, static (or even falling) commodity prices and the declining availability of land in some areas, slowly increase the gap between expectation and reality, at the same time as it becomes more visible. This increasing gap is one of the critical problems of development in the region. Rising expectations in the wake of independence and growing materialism have exacerbated the shift from production to consumption, the decline of exchange, and an increase in social tensions. The spreading taste for commodities has influenced work habits, and, for many in the Pacific, the largest cities and the metropolitan countries exercise a powerful allure, offer a sense of future, and simply validate migration.

Environmental factors have similarly influenced migration. In recent years there has been movement from such places as the Carteret Islands in Papua New Guinea, where localised marine incursions have posed particular problems, and even more recently from Manam (PNG) and the northern islands of the Marianas, following volcanic eruptions. Natural hazards are almost always catalysts for migration, as in the case of the 2009 floods in Fiji, which resulted in an immediate increase in internal migration to urban areas. The movement away from flooded areas exacerbated the already difficult situation for cane farmers, to the extent that the towns in the cane growing areas of the Northern and Western Divisions were predicted to be on the way to becoming ghost towns (Lal et al. 2009:28). Almost all natural hazards, whether tsunamis or cyclones, stimulate rural–urban migration and put added pressure on urban infrastructure.

Global warming poses a future threat to the islands, and especially to over a hundred populated coral atolls, should sea-level rise occur. In Tuvalu, fears are such that emigration has already occurred in anticipation of new difficulties to follow (Connell 2003c). It has been reliably predicted that the towns of Nadi, Labasa and Navua may need to be relocated by 2027 if contemporary predictions of future sea-level rise are correct. If that is so then many other Pacific towns will also be at risk, as will many parts of capital cities such as Nuku‘alofa, Apia and Port Vila. Island states are in no position financially, geographically or politically to defend themselves against such potential threats, but if—perhaps when—the worst does occur then islanders may become a new stream of environmental refugees to metropolitan states.

Permanency?

As all these influences on rural–urban migration have coalesced and intensified, circular or return migration has become of less relative importance, and rural-to-urban migration is progressively more permanent or at least long term. Factors discouraging permanence of the urban population, including the lack of social security, and insecure land tenure, have been steadily offset by economic criteria such as higher urban wages, and the decline of income-earning opportunities in some rural areas.

Access to land is a crucial influence on the duration of urban residence, and individual ownership of land has resulted in considerable urban permanency and marked differences between social groups in the intention to remain in town. In Fiji, for indigenous Fijians urban centres are regarded as locations of employment and modern amenities, and rural communities primarily as locations that offer opportunities for a better social and cultural life and the chance of a peaceful retirement. Indo-Fijians are more permanent urban residents, because of their involvement in commerce, and their inability to secure permanent rural land tenure, especially in the present century. Those most likely to remain in urban areas are migrants from remote places where income-earning opportunities are few, such as the outlying atolls of Solomon Islands, in contrast to more affluent rural regions (Connell 2010, 1988). Where rising expectations are combined with increasing pressure on rural resources, despite static job opportunities in the formal sector, migration from rural areas is more likely to be permanent.

As children are born in towns this stability is enhanced while, increasingly, migrants prefer or at least become used to urban rather than rural life. A quarter of the children born in the large PNG towns of Port Moresby and Lae, for example, have never visited their ‘home’ villages and, if they were to do so, would find acceptance there difficult (Connell 1997a). It is in this context, above all, that the towns of the South Pacific are increasingly becoming more like those in other parts of the world, as second, third, and further generations of urban dwellers emerge with at best only tenuous ties to rural areas. They are effectively caught between two worlds. This is significant not merely for the breakdown of traditional social organisation that it implies but because it effectively ensures that these second (or more) generation migrants are destined to remain and raise families in urban areas, despite popular and government rhetoric that continues to maintain the rural links of migrants.

International migration

In this century alone there has been a spectacular increase in overseas migration from the Pacific, and in unmet demand for it, both from individuals and from governments, who have put increased pressure on countries such as Australia to relax their migration policies. After around thirty years of independence, and disappointment over the challenges and fruits of development, a new outward urge is beginning to spill over, even in Melanesia. If internal migration is intensifying urban problems, international migration is reducing them, as islanders bypass cities, notably those of Polynesia, en route overseas.

International migration has become increasingly important throughout the region. Fifty years ago migration became a significant Polynesian phenomenon, to the extent that there are now more Cook Islanders, Niueans, Tokelauans and probably Samoans and perhaps Tongans (and also Wallisians and Futunans) overseas than at home, while Tuvalu is a belated entrant to the more permanent international migration ranks. Niue, like other Polynesian states, exhibits a long-term 'culture of migration' where migration has become normative (Connell 2008). Larger states, such as Samoa and Tonga, have experienced very limited population growth as emigration has become something of a 'safety valve' for high population growth rates, but perhaps more obviously, for slowly growing economies.

The Micronesian states, notably the Marshall Islands, have followed suit (after the signing of the Compacts of Free Association that guaranteed migration to the United States and its external territories, such as Guam). That has significantly reduced the extent of urbanisation in the Marshall Islands and elsewhere. Melanesian states have only recently experienced international migration, and then primarily of a limited but significant number of skilled workers (such as geologists and doctors) and of temporary guest workers. By contrast to Micronesia and Polynesia this has imposed greater pressures on urban areas to absorb migrants.

The shift from a more broadly based structure of migration towards more skilled migration has created a new dimension of inequality. No longer are the poor so easily able to move (and new, more equitable guest-worker schemes are too small-scale to alter that), whereas the relatively rich (or at least those who have acquired training and marketable skills) are actively courted and recruited. There is growing international competition for a wide range of skilled workers.

The proportion of skilled and highly skilled Pacific Islanders among all migrants is increasing, as a result of shortages and even private sector recruitment in the receiving countries, from New Zealand to the Gulf. Low remuneration, poor promotion opportunities, limited training and further educational opportunities, poor working and living conditions, particularly in remote regions, are push factors for skilled migrants. The growing shortage of skilled workers has also contributed to increased intra-Pacific migration with workers migrating to countries offering better work conditions and salaries, such as Fiji nurses and teachers migrating to the Marshall Islands and Kiribati, and tourism workers moving to the Cook Islands.

As metropolitan states have made migration more difficult and sought skilled migrants, both illegal migration (and overstaying) and the growing dominance of skilled migration have occurred. Fiji and other island states are now seen in Australia as 'high risk' states because of the extent of overstaying, and there are many illegal Fiji and other overstayers in the United States (e.g. Scott 2003) and New Zealand. Skilled migrants, and particularly skilled health workers (Connell 2009), but also teachers (Voigt-Graf 2003), football players (Grainger 2008) and others, have made up growing proportions of migrants, especially from Tonga, Samoa and, in the wake of the 1987, 2000 and 2006 controversial changes of government, from Fiji. This brain-drain has become excessive in some of the small states, but remittances have boomed. The Cook Islands, for example, lost half its vocationally qualified population in the single decade 1966–76, and much the same happened again in the 1990s when the national economy collapsed (Connell 2005). Consequently there is a shortage of various skilled workers in most island states.

Return migration has not solved skilled labour shortage problems. Even two decades ago, in the case of migration of Tongans and Samoans to the United States alone, 'Emigration results in the permanent loss of young educated skilled labour from the Pacific island nations. Skilled labour is in short supply and emigration probably hinders development' (Ahlburg & Levin 1990:84). This is certainly true more generally in the health sector, where more costly (and sometimes less skilled) replacements have sometimes been required. In small island states it is unusually difficult to replace skilled migrants, because of both the duration of training that is required and the very small demand for some particular skills. This is again particularly true of highly skilled health workers.

It is equally evident that, because of the necessity for appropriate skilled training, it is more difficult to substitute for (or transfer from elsewhere in the public service) absent skills in the health workforce. Wards are closed, waiting lists and times lengthen, examinations are more cursory, or complicated by new cultural differences (Connell 2009). The outcome of this is that basic needs are less well provided for, especially in remote areas or outer islands, significant proportions of budgets are directed to referrals and the Millennium Development Goals (MDGs) recede into the distance. While other skilled migration losses, outside the health sector, may not now be either generally significant, or have negative implications, such demand-driven migration is likely to have negative consequences in the future, in terms of the loss of skills to the region, and the challenges this then poses for national and urban development.

Into the towns and cities

The growth of cities and towns has contributed to various facets of development as towns have become centres of employment, politics, culture, education and service provision, but in recent years it has become more evident that urbanisation has posed new challenges for national development. More specifically urban development has become problematic, urban centres are perceived as eyesores as they have come to be associated with environmental degradation, overcrowding, unemployment and some degree of social tension and crime, where effective management and planning are weak. While such problems are far from universal, and pose problems above all for the inhabitants of the expanding settlements, they appear as the unpleasant face of limited economic growth. The various issues that accompany and trouble the growth of cities can now be examined.

Land

Land issues have often made some facets of development, including urban development, particularly difficult where land is mainly owned by local indigenous groups. Leasing land for modern developments such as hotels and urban planning have, thus, created challenges for governments. Throughout Melanesia there have been rising demands for compensation for land used for 'development' even where that use benefits the landowners. While compensation issues have raised real problems in Papua New Guinea, even in Fiji the national newspaper has stated that: 'native land disputes are spiralling out of control in this country. Poor communication, delays by the Native Land Trust Board in resolving problems, defaulting tenants and greedy and law-breaking landowners are some causes of disputes which threaten peace in the community and deter investment' (*Fiji Times*, 4 February 2004). Access to land is zealously guarded, as land is the critical and enduring source of wealth, and has discouraged attempts at development in many places, and complex issues and problems have attended external efforts to encourage land registration and privatisation, and thus an 'orderly, regulated and planned' urban development.

A distinctive form of urbanisation has appeared in the Pacific associated with the rights, and the lack of rights, of residents to land in urban areas. Cities and towns are characterised by rapidly growing uncontrolled fringes of peri-urban customary land, settlements on marginal lands—such as swamps and hillsides—beyond the reaches of the formal housing sector, and pockets of traditional villages swallowed up in the expanding modern town. Only in Suva, Port Moresby and a few other cities are there tracts of modern suburban low-density development. Otherwise, new offices and tourist establishments and the expensive dwellings of the elite (still largely expatriate in parts of the region) coexist uneasily with low-income suburbs and place huge demands on poorly developed networks of infrastructure and services. This complex and increasingly differentiated townscape is seldom under the jurisdiction of a single municipal authority, few of which exist, and rarely are service providers (even state-owned) expected or compelled to extend provision to informal settlements or residential areas located on customary land, especially beyond urban administrative boundaries. Management problems are visible in environmental degradation, traffic congestion and poor quality housing. Social and physical variations within towns reflect the availability and provision of housing. Within the towns enormous differences in residential standards occur.

In almost all Pacific Island countries urban land is effectively saturated and much new development is taking place outside the formal city boundaries and therefore beyond the institutional and legal scope of authorities and planning. Pacific cities are spreading and developing on a mix of government/crown, freehold and customary land, weakening the authority and even relevance of much urban planning (where it exists) and resulting in ad hoc development of urban areas. While land reform to increase access and affordability is critical for many towns and cities the likelihood of this occurring is small, given continued sensitivities over land tenure and the relative strength of customary landowners compared with weak urban institutions.

In Kiribati, for example, outside small pockets of state-owned land, urban land is privately held and government is reluctant to confront owners and traditional leaders over the way it is used. Where formal leasing occurs it has been overwhelmed and replaced with informal agreements. Even in South Tarawa, where 60% of land is in government ownership, most development is taking place on private or traditional land as the use of government land is contested between the Land Management Department and the two town councils of South Tarawa. Population growth is also placing severe stress on South Tarawa. Land is being degraded, water tables polluted and exhausted and foreshores have eroded to the point that they offer little resistance to tidal surges. Recent trends have seen an increasing landless population and pressure on reforming land tenure to prevent these trends as well as ameliorate overcrowding.

Throughout the urban Pacific traditional tenure has not avoided the commodification of land and spiralling costs—and has probably accelerated these trends. Management and codification of land is spread across local and national agencies, and coordination between them is often weak. This is made more complicated through landowners retaining powerful ‘veto’ rights. As a result, uncontrolled squatting makes planning difficult and occupies remaining public space. While existing powers are open to governments to appropriate land for the public good these powers are rarely if ever used, largely a result of the perceived (and likely) political repercussions.

As pressures on urban land have increased so traditional landowners have sought to reinforce their ties to what is increasingly valuable land. Where indigenous rights to land have been strengthened, a worthy aim in itself, complications have arisen. For example, the displacement and movement of people from Fijian villages and expiring cane leases conflicts with the need for landowners to obtain a livelihood from the *qoliqoli* (beach lagoon and reef areas), making these coastal areas highly contested (Bryant-Tokalau 2008). In circumstances of political uncertainty (over legislation relating to the transfer of land and marine rights) and growing poverty, resolution of such tensions becomes more difficult. By contrast, similar desires for income from coastal land have led to the effective commodification and privatisation of that land, at least to the point of it becoming available for sale and long-term lease, as in Vanuatu. Around Port Vila land sales for resorts or private homes (oriented at foreign investors) have intensified land disputes and marginalised poor urban residents who have used such land for gardens (Slatter 2006). Around Honiara illegal sales of crown land have escalated to the extent that it has been estimated that foreigners own about 75% of all crown land in Honiara, hence land prices have increased beyond the reach of many local people, government buildings are rented expensively from foreigners, and public areas (such as parks) are non-existent as ideal seafront sites have been taken (Sasako 2009). Around most large urban areas similar tensions and problems exist as land comes under greater pressure and consequently becomes more valuable for various purposes.

Further complications arise where landowners who have negotiated leases with settlers die and new arrangements are negotiated. In Wewak (PNG) there is evidence that this has resulted in the ‘new’ landowners attaching much more stringent regulations to the use of land, for example banning some economic development strategies such as fishing, using mangrove swamps for collecting crabs, shells and wood, and restricting gardening, numbers of houses (and ethnic groups) and the establishment of trade stores (Numbasa 2009). Once again such practices attest to the greater competition for land and other urban resources.

Every single one of these cases and trends points to the growing significance of land, its commodification (despite attempts to retain traditional or enhance state ownership), the impossibility of developing urban plans where sensible land use planning is possible, and even the inability of governments to discourage trends towards uneven development. Critical problems relate to the challenges governments and urban authorities face in prevailing over the multiplicity of local landowning groups, even when this is desirable.

Where it occurs, formal subdivision or registration of land is proving too slow, expensive and bureaucratic in the face of rapid and escalating demand. This is resulting in the growing prevalence of informal leasing throughout the Pacific. While this is satisfying basic access to land, such informal agreements between landowners (often several) and ‘squatters’ are prone to change and can result in conflict. Essential legal protection, especially for renters, is absent hence conditions and payments are uneven and subject to change. In Fiji and Vanuatu more recent migrants to informal settlements complain of being harassed by those claiming to be indigenous owners of the land demanding rental or other payments in kind. There is little evidence of any formal or written agreements over squatting or renting on customary land (though informal rentals have sometimes lasted decades) and this situation often opens the door for potential abuse and vulnerability (as evident in the case of Wewak). In some cases traditional landowners do not allow squatters to have their own gardens, through fear of competition at

local markets or due to the lack of available garden space (or their own preferences for a higher -value use of the land, as in Port Vila, where agricultural land leased to settlers in Seaside was resumed for potential residential development). Similarly custom landowners often resist settler attempts to improve the quality of their temporary housing for fear that it will be seen as permanent.

As population pressure increases in peri-urban and customary areas, land tenure systems will need to be addressed, as will the role of traditional landowners. The case for wholesale privatisation of customary land remains politically and culturally untenable and more innovative solutions are required. In Port Moresby strategies that seek to mobilise customary land for housing and investment, while also providing greater security and recognition of customary ownership, have provided an example of finding a middle ground between tenure security and the traditional rights of land custodians (Chand & Yala 2007). Similar middle ground has also been sought through Temporary Housing Authority (THAs, or 'leaf housing') in Solomon Islands where migrants are provided a temporary form of squatting rights though without formal and permanent tenure security. While providing a breathing space in the absence of the creation of alternative formal housing options THAs have in effect become permanent settlements, though without access to electricity and water supplies or formal inclusion in the city proper (Talbot & Ronnie 2007). The case of Vanuatu, where options for formal urban expansion are limited by customary land and landowners, and which is leading to greater conflict, also provides a strong case for the need to address land issues more effectively, to enable more rational urban growth while identifying a continuing role for traditional systems (Storey 2005). Successful examples of this in the region, though, are hard to find.

Housing

Land tenure shapes the pattern and availability of affordable and secure housing. Housing is often a barometer of people's income, their level of security and their access to resources (including land). Although informal settlements do not always house the very poor, and often house public servants (especially in Port Moresby), the fact that Pacific middle classes have few alternatives but to live in poor quality housing areas is an indication of the low incomes and high relative cost of living in many Pacific Island towns and cities. A great majority of migrants to cities in the region now build their own houses outside formal legal regulations. The 'autonomous' growth of the region's cities beyond formal planning and management may meet immediate shelter needs but does little in the way of providing a model of sustainable urban development.

Although state-provided housing has been pursued in many Pacific Island countries it has long proved inadequate. A Fiji Housing Authority report estimated that since the 1970s some 70% of applicants were unable to afford repayments on low-income housing that conformed to legal requirements (UNESCAP 1999). This has meant a recent explosion in informal settlements as the only viable shelter alternative for migrants and the urban poor. Though informal settlements in the Pacific have a long history, considerable recent growth has been evident throughout the region, though with specific drivers. In Fiji, the expiry of Indo-Fijian (agricultural) land leases and the coincident poor general economic performance have resulted in Suva's squatter population alone increasing from 51,925 in 2001 to 82,000 in 2004. The number of squatter settlements nationally was estimated to be 182. Subsequent estimates put as many as 120,000 people, about 15% of Fiji's population, living in some 200 settlements and predict that by 2010 the Suva–Nausori corridor will have 15,000 squatter households with 100,00 people (FijiLive, 23 August 2009), demonstrating the regional shift towards primate cities as the loci of activity. The Ministry of Local Government, Housing, Squatter Settlement and Environment (MLGHSSE) and the ADB have estimated that some 70–80% of new land developments around urban areas have been through informal agreements and some 80% of new housing stock has been built independently of official planning authorities. In essence Fiji's booming urban areas are being developed largely autonomously, outside the control and authorisation of government and planners, and this same trend is evident in several other Pacific Island countries.

Burgeoning informal settlements are the destination of Indo-Fijian cane farmers who have no customary rights to land but also of Fijians moving to cities to further their own or their children's opportunities, though they have access to rural land. Increasingly these settlements consist of makeshift shelter, with no water supply, poor sewerage and sporadic access to electricity, and are increasingly characterised by overcrowding. ESCAP has thus concluded that 'there is a need for governments to take a more proactive approach with squatter settlements, particularly in promoting a greater understanding of rights and services' (ESCAP/POC 2002:30). However, opposition to settlements is much more evident than any form of support (see below). Yet, while

governments are loath to relax building codes and regulations in informal settlements, the creation of affordable formal housing by government and non-government institutions is woefully inadequate. Government housing authorities have generally failed to provide affordable housing (in the right places) for other than relatively well off groups. In 2006 Fiji Housing Authority (FHA) houses were typically priced between F\$12,000 and F\$15,000 with mortgages offered at 5–6%, beyond the scope of the majority of many of those living in informal settlements with family incomes of F\$100/week (although it is often claimed that some of those in settlements can afford formal housing). Even NGOs struggle to make any serious impact on demand. As an example, the Housing Assistance and Relief Trust (HART) estimated that it built 60 new flats in Fiji in 2002 and Habitat for Humanity finished 29 houses in Vanuatu over the period 2001–2005. In effect these are little more than demonstration houses. Vanuatu faces similar problems of informal settlements providing essentially the only affordable housing for the vast majority of the population in Port Vila and Luganville. With the demise of the expensive housing schemes of the National Housing Corporation (which only managed to build 49 houses in total) Vanuatu has no national scheme to provide affordable housing for low and middle-income families. Similar state-provided housing failures are evident throughout the Pacific. Failures can be accounted for by a lack of will, poor management, the considerable expense of constructing housing (where many materials must be imported) and the lack of appropriate land.

With formal housing outside the reach of many, increased pressure is evident in informal settlements. The settlement of Blacksands, north of Port Vila, experienced a 47% growth in population, 1997–2000 alone. In atoll states such as Kiribati crowding is a particularly pressing problem. With over 1,000 homes in South Tarawa each accommodating 10 or more people, communicable diseases and stress are common afflictions; the same is true in Majuro (see below). The Kiribati Housing Corporation (KHC), which has built a large number of the formal houses in South Tarawa (numbering around 1,216 in 2003), caters primarily to civil servants and many houses are currently in various states of disrepair (Eratai 2003:27). In some parts of South Tarawa (e.g. Betio), one-third of all households are squatting. The KHC has estimated that at least another 1,038 additional houses are required in South Tarawa, but that they cannot provide them (Eratai 2003:73). Increasingly, informal settlements are being built within family compounds, leading to higher population densities and less open space for recreation, gardens or access. Informal housing is also spreading onto water reserves and closer to coast lines, leading to degraded environments and threatening watersheds, and also becoming more vulnerable to hazard. The prevalence of informal housing is compounded by the absence of realistic building codes and any viable alternative to meet needs. This scenario applies to some extent throughout the Pacific but environmental pressures are especially acute in the densely populated atolls of Kiribati and the Marshall Islands.

Renters in countries such as Vanuatu and Fiji are uniformly over-represented in national categories that indicate extreme poverty and vulnerability. In Port Vila, for example, several family members or friends share one room in a 6–8 room block and typically pay between 8000 and 15000 Vatu (US\$80–150) a month to someone who, in turn, leases land from a customary landowner. Though those renting on customary land often have the least protection in terms of legal redress for their housing conditions or tenancy, such housing offers affordable and flexible access. They are also more likely to have insecure living status and conditions, constantly moving from settlement to settlement to avoid paying high rents, which are volatile and rarely subject to negotiation. Their vulnerability and poverty is obvious. While it is difficult to estimate the number of renters, it does appear to be increasing. In some parts of peri-urban Port Vila almost 80% of people rent and a rentier/landlord class is clearly emerging within many poor settlements.

In terms of availability, affordability and responsiveness, Pacific land and shelter strategies are struggling to match needs. There is a clear growth of peri-urban and informal settlements on indigenous land, which is resulting in ad-hoc development. In the next generation, unless more effective responses and institutions are put in place, informal settlements on indigenous land will become the dominant form of new urban growth and this will make infrastructure and service needs very difficult to address, as well as ensuring that land access continues to be a potential source of conflict.

Inequality, poverty and urban livelihoods

Though urbanisation in the Pacific was initially a function of the need for administrative services, and subsequently more wide ranging service provision (apart from in mining towns), over time, as elsewhere, towns and cities have evolved towards multiple functions. Towns are thus centres of economic development, however limited this may be, attracting migrants drawn by employment and economic opportunities and by the possibilities of

social mobility. To understand the functional basis of urban life it is necessary to place this in the context of national economic development (where towns and cities play a role as transport nodes, ports and centres for the processing of some raw materials) and subsequently urban economic development, since this is crucial to the nature of employment and unemployment. Economic growth in the region has been limited with one important consequence: formal sector jobs are everywhere being created more slowly than school leavers are emerging from the education system. The consequence is rising unemployment, the growth of the informal sector and visible signs of poverty within the urban areas.

Economies and employment

The economies of Pacific Island states and territories are constrained by various factors linked to their small size. Urban economies are similarly limited, and almost all exports are from rural and regional areas. Most towns have dominant administrative and service sectors—the principal reasons for their establishment—and these are often the only real contemporary economic functions (important though they are) in smaller centres. Employment is often dominated by the bureaucracy, and therefore by the public sector, but in most places there is significant employment in transport, business activities and tourism, and thus in the private sector. Indeed it is perhaps only in some of these private sector areas where urban employment is increasing.

Most urban economies are dominated by national governments because of the significance of the public sector, even in areas such as fisheries. Efforts to privatise and to increase competition are being made throughout the region, driven by external agencies such as the ADB and IMF, but the effects on urban employment have been trivial, despite a more conducive business environment having been put in place.

Employment thus invariably remains dependent on the bureaucracy and service sectors. The former is generally privileged, its higher wages and better job security and fringe benefits (though eroding) ensuring that it is the most sought after area of employment, second only to being a politician. Access to urban employment, even in the public service, is influenced by kinship ties, and in the larger island groups many enterprises are dominated by workers from a particular language group or region, a circumstance that may reduce productivity. In recent years public sector employment has stabilised and contracted, again partly following external pressures, posing problems for urban economies and also for service provision. In those countries where tourism is important many tourism facilities are in, or close to, the urban areas—as in Port Vila, Nadi and Rarotonga—and this labour-intensive industry employs a substantial proportion of the urban workforce (Connell & Lea 2002). Otherwise, urban employment is dominated by the visible evidence of retailing and other tertiary services.

In the transition from colonial towns, urban economies diversified, but the manufacturing sector is small throughout the Pacific. Where manufacturing industries have developed, such as the garment industry in Fiji, they have proven to be uncompetitive and have relied, in large part, on favourable tariff arrangements and low wages (Storey 2006). These have proved ephemeral, and the garment industry is in decline, most dramatically in Saipan. Similarly, small industrial centres have either rapidly declined, as in Nuku'alofa, or never got off the ground, as at Lae. Hampered by location, high wages transport and insurance costs, and absent raw materials and skills, industrialisation (other than mining, with its distinctive mining towns, now only in Papua New Guinea) has rarely gone far beyond 'bread and beer' import substitution industries. Most manufacturing activities involve the processing of local agricultural and fisheries produce, and (with the exception of fish canneries in Papua New Guinea, Fiji and American Samoa) these are of limited extent. Although breweries have been constructed in the Marshall Islands, Papua New Guinea, Tonga and Vanuatu, the phase of import substitution has largely passed; hence there has been a declining rate of urban job creation. Beyond food processing, industrial activity centres on the small-scale production of wood and metal products and on engineering. Industrial employment therefore accounts for only a small proportion of the urban workforce.

In still primarily subsistence oriented economies, employment is essentially an urban phenomenon. Access to employment is usually considered to be most limited in the informal settlements, especially those of recent origin, yet what Jackson recorded of PNG towns three decades ago may be even more true now: 'settlements are frequently the homes of people less transitory, no more unemployed and just as urbanized as other sectors of the population' (1976:49). However, even in the large towns of Papua New Guinea, where the combination of migration, growing urban permanence, few new urban employment opportunities and the lack of industrialisation might have been expected to have resulted in the emergence of a the informal sector, where wages and conditions of work are unregulated (see below), its growth has been limited compared with that in some other developing countries.

Few adequate measures of employment exist in the region, and definitions of employment can be variable and problematic. In the larger towns it is apparent, however, that unemployment is increasing, and the struggle for jobs is a constant urban preoccupation. In the early 1990s a third of the population of Port Moresby was searching for work, with most of the unemployed being in the 15–19 age group, many of them with little or no education (Connell 1997:196).

Unemployment is essentially an urban phenomenon, and rising unemployment occurs in all urban areas, though there are rarely adequate measures of its extent. At the time of the 1990 census in Papua New Guinea, the overall urban unemployment rate was measured at 29%; though this was probably an overestimate because of the role of the informal sector, it is unlikely to have declined since then. Where measurements are more or less reliable, the extent of urban unemployment is never below 10% (despite censuses that sometimes indicate otherwise) and may well be higher in many cases. Many urban households do not include wage and salary earners, but rely on distant kin, subsistence production on the edge of town or involvement in the informal sector. Consequently there is growing recognition of the existence of significant numbers of unemployed and marginalised youth in most urban centres, as for example in Port Vila (Mitchell 2004). Unemployment is particularly high amongst youths (Bryant 1993:46; Abbott & Pollard 2004; see below). In Nuku'alofa the overall unemployment rate in 1986 was reported as 11 per cent (compared with 8 per cent for Tonga as a whole) but for youths aged 15–19 it was as high as 28 per cent and the female rate in this age group was more than 50 per cent, an indication of the growing presence of youth unemployment, even despite substantial emigration. A decade later in 1996 unemployment remained at a similarly high level (Abbott & Pollard 2004:52). Moreover, inadequate access to employment, land and credit has led to increased levels of unemployment in both the small Vava'u town of Neiafu and in Nuku'alofa (Gailey 1992). This, in turn, has stimulated emigration. In Jenrok, in the midst of urban Majuro (Marshall Islands), the unemployment rate was 47% compared with a national average of 31%, while the average number of people working in a household was 1.8 though the average household size was 9.5 and the number of people in a household could occasionally reach 20 with migration from outer islands (Chutaro 2005:10; cf. Russell 2009).

Youth unemployment is also high in Fiji, and again especially amongst those with poor educational qualifications in urban areas. In Vanuatu too, youth unemployment is increasing, with many 'killing time' in public areas; such youths have acquired the name SPR or *sperem publik rod* (literally 'roaming the streets'). In Papua New Guinea they are *pasindia* (literally, 'passengers'). In Blacksands (Vila) about 10 per cent of the population were unemployed, yet working lives were generally short, hedged in by insecurity, poor conditions and low wages (hence workers simply drifted out of work, often as a result of injury or illness, or left in frustration), made more difficult by limited skills and little job creation. Employment aspirations were far from being satisfied (Mecartney 2001). Broadly similar conditions occur throughout the region, but are much less evident and undocumented in the smaller states (Abbott & Pollard 2004). They are seedbeds of discontent, and elements in social disorganisation, as in Honiara and Nuku'alofa (Connell 2008b) and incentives to migration, but amongst those least able to achieve, or gain from, that.

Informal sector

Despite its limited development, the combination of migration (so that urban growth is in excess of urban job creation), growing urban permanence and few new urban employment opportunities has resulted in the growing significance of the informal sector as a source of livelihood—though governments have been slow to recognise its role in employment creation and poverty alleviation. Detailed studies on the informal sector in recent years have been rare. However, in urban Fiji, Solomon Islands and elsewhere the informal sector plays an increasingly important role in employment creation and labour absorption (Reddy et al 2003; Russell 2009). Generally, however, the relative absence of informal sector activities in the Pacific is partly due to restrictive legislation. There is a 'common and pervasive bias against small-scale industrial ventures that are carried out within the purview of the so-called informal sector' (Fairbairn 1992:24; Connell & Lea 2002). Nonetheless, the growth of prostitution and the rise of crime have been visible manifestations. Prostitution has grown rapidly in Honiara, Suva and Port Moresby. In 1995 about 38% of otherwise unemployed women were reported to be working as prostitutes in Port Moresby (Levantis 1997) while incomes from sex work in Honiara were higher than anything else that was possible in the informal sector (Russell 2009:58). The almost universal rise of prostitution in the Pacific is symptomatic of the problems of limited economic growth, unemployment, the social costs of urbanisation, the decline of traditional social control mechanisms and also the potentially high earnings. Scavengers and beggars now exist even where poverty is denied. In both of the two largest cities

(Port Moresby and Suva) and elsewhere, the rise of urban poverty and the informal sector has been marked by new repressions of the poor and marginalised, in new anti-urban policies, as they are forced out of urban areas, most dramatically by the bulldozing of settlements, and by attempts to devolve solutions to the churches from the state, rather than by concerted attempts to devise welfare and employment policies that might reduce such problems (Connell 2003b; Koczberski et al. 2001; see below). Even urban markets and market vendors have been opposed by urban and national governments, despite their ability to provide substantial employment, for both youths and women.

There has long been an almost total absence of handicraft workers and the small-scale traders and service-repair establishments that provide a large volume of employment in many other countries. The most visible elements of the informal sector are food vending, crime (and its converse, security provision), betel nut selling and bottle and can collecting (though especially in Port Moresby). Only in the market sector of the economy has the informal sector been of considerable local importance, though in Tonga the success of flea markets brought conflict with the formal sector (Brown & Connell 1993; Besnier 2004). Despite a high level of unemployment, fewer than 10 per cent of income earners in Blacksands (Vila) were engaged in informal sector activities, mainly because the market was small, and competition was considerable, and lack of land, skills or licences prevented success. Income-earning activities included handicraft production, small-scale trading (of fish and garden produce), small-scale production (mostly cooking, tailoring and carpentry) and domestic work. Work was invariably intermittent, seasonal and poorly rewarded (Mecartney 2001). Much the same was true in Namadai (Suva) where various family members participated in activities ranging from grog (kava) packing and selling cigarettes to basket weaving and grass cutting, but some experienced problems from mismanagement, theft or the delayed arrival of inputs such as leaves for weaving (Koto 2008). A more detailed survey of six settlements in Honiara revealed a great diversity of informal activities from prostitution and the manufacture of home-brew (*kwaso*) to handicraft manufacture and a range of agricultural activities (Russell 2009). As in the market sector, women predominate for several reasons: gender discrimination in the formal sector, limited education and skills and the ability to combine informal income-generating with a domestic role. If markets and small businesses are the positive manifestation of the informal sector, through their contribution to incomes, employment and nutrition, the converse is crime and prostitution, increasing components of urban employment and lifestyles.

In Fiji the informal sector accounted for more than 50% of jobs in 2002, up from an estimated 37% in 1996. The principal occupations were vegetable sellers, couriers, fish sellers, BBQ operators and 'shoe shine boys' (Reddy et al. 2003). Most operations were run by women, had been established for more than a year, and operated six days a week and ten hours a day. Most were family operations operating in public spaces and a considerable number were 'rural' or peri-urban workers who travelled into town to sell goods, indicating the strong inward-outward flow of labour and capital, which characterises Pacific towns and cities. Through selling betel nuts and other rural produce, and using rural goods such as pandanus leaves, the urban informal sector plays a key role in supporting rural economic development. Ironically, betel nut selling is the most vilified of informal sector activities and betel nut sellers are regularly harassed. Urban residents, many of them self-employed, purchase a substantial proportion of their food (and other goods) in the markets. In larger towns middlemen link urban markets with rural production. In most towns the formal sector workforce is youthful.

Incomes and poverty

Poverty is not a welcome word in most parts of the region, and few countries officially admit that it exists, but there is now growing evidence that it is widespread, though disguised by weasel words such as 'hardship' (Abbott & Pollard 2004). Much poverty is also largely hidden in outer islands and remote regions, where there is both a poverty of opportunity and minimal access to crucial educational and health resources, alongside employment opportunities. One consequence of this is sustained rural-urban migration, hence a major task for most states is to create employment, and provide services in outer islands and remote places, which would stimulate outer island development and reduce migration and thus unmanageable urban growth. Because of the primacy of agriculture and fisheries in national development, that should in any case be a priority.

Poverty is most visible in some urban areas. Even formal sector employment does not guarantee escaping income poverty. Most urban poor families have at least one income earner in the formal sector, but stagnating economies, low wages, high costs and young dependents may mean that household income remains below the poverty line. While employment creation is an important part of poverty reduction, wage levels are also a key issue. In the absence of well-paid formal sector employment, secondary/informal sources of income have taken

on a greater importance for many urban families. At present, 35–50% of Fiji's urban population and over 60% of urban Ni-Vanuatu work in the informal sector, and a high proportion of these are women. As in Port Vila, a significant part of this informal activity has been stimulated by the provision of micro-credit; many small urban stores and market vendors have been able to develop only through such support (Pieters-Hawke 2007). Though the options for formal employment-generating industries are limited in a liberalised global trade environment, governments have, in the past, been reluctant to legitimise informal sector work despite its critical role in job creation and poverty reduction, and have actively attacked components of the informal sector, notably in Port Moresby (Connell 2003b). Fiji and Papua New Guinea have recently relaxed some laws on self-employment but there is more to be done in the region in using informal sector employment as a basis of income and business opportunity. In the future the informal sector is likely to be the most important and accessible entry point into business and income generation for the poor providing a critical source of employment generation and enterprise.

Standard urban income sources are the more regular wages from formal employment or earnings from the informal sector. Rare national social security schemes, such as the Family Assistance Scheme (FAS) and the Poverty Alleviation Fund in Fiji, have almost no impact on the incomes of most households. However, some households also receive remittances from international migrants. In Namadai settlement (Suva) in 2002 four of the fifty households received remittances, mainly from kin in the British army, which was a very significant part of their household income, enabling them to purchase expensive furniture and electrical goods that other households did not own (Koto 2008:61–2). Remittances may have subsequently become a more important source of income in urban Fiji, as they have long been in Samoa and Tonga.

Limited opportunities to make an income to support households and kin adequately, and increasing competition for the employment opportunities that do exist, are significant influences on urban poverty. Again, there have been few consistent attempts to measure urban poverty in the Pacific, other than in Fiji, but the increased extent of begging and crime in several countries suggests that poverty is of growing significance, especially in the larger towns. Poverty is resulting from, and manifested in, increasing urban populations, a lack of employment opportunities, the absence of effective safety nets, and limited access to land and quality housing.

Until quite recently there was a widespread belief that poverty did not exist in the Pacific, because of the existence of both urban and rural 'safety nets' where extended families could and would support those who for whatever reason experienced temporary problems. There is now good evidence that both of these are breaking down and it is no longer possible, if it ever were, for urban people simply to return and be supported by rural kin. Indeed many of those who have migrated into urban areas, as in Vanuatu, have come from regions where there are high population densities and few economic development opportunities, hence there are few economic prospects to return to, and long absences make return more challenging (Connell 2003a: 68–70). Indeed, as the PNG *Post Courier*, has made clear: 'You would have to be blind, if living in Port Moresby at least, to hold to the belief that there is no poverty here . . . there are people who do not know their mother or father's place of origin. They do not have those clans and extended family networks to rely on. They are in the streets relying on begging or stealing to survive' (21 October 2009). The popular and romantic view of an urban safety net provided by the extended family, ensuring through redistribution that kin are never hungry or destitute, is no longer valid. In urban areas established households are increasingly reluctant to host impecunious and unproductive kin and wantoks from distant rural areas (Monsell-Davis 1993). In Jenrok (Majuro) the situation where just a couple of household members worked, but supported many more kin, had caused serious tension among family members, and safety nets had become all too problematic (Chutaro 2005). In squatter settlements, especially, hunger and poverty are no longer unusual, nor is the sight of families picking through municipal garbage sites, or market debris, for food. Homelessness now exists (with the City Mission in Port Moresby establishing a soup kitchen in 2009 to serve more than a hundred young unemployed men who often came from broken homes and lived at the centre).

Absolute poverty is not otherwise generally apparent in the Pacific. However, some households are poor through not having enough food, clean water or access to an adequate house or basic education (Bryant 1993). Where there are data it is evident that urban poverty is increasing, though less visible rural poverty is no less significant. In Fiji, for example, the 1967 Household Income and Expenditure Survey recorded 7% in poverty; by 1990 the same survey recorded 25% in poverty with a further 25% vulnerable. By 2002 the same survey recorded about 30% in poverty. Similar proportions exist elsewhere, and that proportion compares with 38% in Papua New Guinea, 40% in Vanuatu and 20% in Samoa, in terms of people living below US\$1 a day, though many of

those are probably rural (Abbott & Pollard 2004). In Solomon Islands some two-thirds of Honiara households reported expenditure greater than their incomes, and a third of the urban households were below the poverty line (Russell 2009:13, 15). However, in Papua New Guinea it has been estimated that in 1996 as many as 41% of rural people and 16% of urban people were below the poverty line (Allen et al. 2005). If such estimates are correct there remain real economic advantages from rural urban migration.

In none of these states is it likely that poverty has subsequently declined. In Fiji almost half of those who were receiving wages were not getting enough on which to survive, as the emergence of a growing category of 'working poor' had made evident. Many of these are women or in female-headed households. Only the very poorest of those in poverty were actually receiving government assistance. No other state has data comparable with those from Fiji, but it is highly likely that similar trends of worsening poverty exist elsewhere, especially in Melanesia. What is important about the Fiji data is that, firstly, the extent of poverty actually grew significantly between 1975 and 1991 when the Fiji economy was growing relatively rapidly. In other words no effective trickle-down effect was occurring, which meant that inequalities were simultaneously increasing. Secondly, Fiji has generally achieved greater levels of economic growth than other island states, hence the extent of poverty and inequality may be greater in other places, notably elsewhere in Melanesia and Micronesia.

Settlements and urban poverty

Accelerated migration and rapid urbanisation after the 1970s brought the growth of squatter settlements and early recognition of urban development problems. The rise of settlements is a consequence and visible demonstration of poverty. In every country urban areas are growing faster than the rate of population growth. Consequently settlements are growing particularly quickly, as the supply of land and formal housing is inadequate to meet the needs of new migrants (or even established residents and their kin). In both the two largest cities in the region, Port Moresby and Suva, settlements house more than half the urban population, and in both cities there are more than a hundred settlements. In Suva the expansion of settlements is a result of rural-urban migration precipitated by the demand for services (especially education), the expiry of land leases and the breakdown of extended families. Similar rationales exist elsewhere.

A growing differentiation has emerged between those permanent urban residents who are relatively poor (including some long established urban villagers and the migrants from poor rural areas) and others who are well off. This has become most apparent in Melanesia and, to a lesser extent, Micronesia. Many of the urban poor live in settlements, and socioeconomic inequalities are most evident in urban areas. Those who were particularly disadvantaged had little or no support from the rural economy and no opportunity to move away from town when poverty, rising unemployment, old age or social disorder made urban life difficult, at least for those who were, in one way or another, 'trapped' in town. In Blacksands, for example, insecurity over land tenure and employment meant that migrants contemplated return, but most realistically believed they would remain in town for their children's sake (Mecartney 2001:80). Most households in Blacksands had incomes below the national average and at least a quarter had problems meeting school fees, paying rents and providing food. Most supplemented their cash incomes from subsistence food gardens, an option not open to many settlement residents, especially in Port Moresby. As in many international contexts, return migration is constantly deferred ('until children leave school', 'until enough money is saved', 'until retirement' etc.) until the point where it becomes implausible. The combination of growing urban permanency, high unemployment and increased expectations has put considerable pressure on urban services. Low incomes and a lack of support during illness or unemployment give a sense of biding time, waiting for unforeseen and uncertain opportunities and sometimes securing multiple jobs, maintaining strict budgets and abandoning some 'traditional' obligations, simply to get by. Many urban residents survive rather than prosper in the city.

By the early 1990s more than a third of the households living in urban settlements in Fiji were considered to be poor, compared with less than half that proportion a decade earlier (Bryant-Tokelau 1995:110). Poverty is equally apparent in settlements elsewhere in the region. A further consequence of poverty and other difficult urban conditions is the growth of suicide and domestic violence, though neither is exclusively an urban phenomenon, and the increase in the number of female-headed households that follows on the heels of family breakdown and social disorganisation. Thus Jenrok, in urban Majuro, has extremely high levels of general violence, domestic violence, suicide rates and substance abuse (Chutaro 2005). Karaina (White River) on the edge of Honiara has an even worse reputation for violence, drunkenness and domestic abuse (Russell 2009:22). Several settlements in and around Port Moresby are not dissimilar.

Highly vulnerable and poor populations are emerging in and around cities throughout the Pacific. Vanuatu's 1998 Household and Income Expenditure Survey, for example, showed that, while income poverty was more widespread in rural areas, levels of 'extreme poverty' were overrepresented in urban areas. Young couples aged in their twenties with children, female-headed households and those renting were particularly vulnerable, even though the majority of these households had at least one source of income (Government of Vanuatu 2002:22). When asked to prioritise their needs the most common responses were finding a house to rent; access to finance; having land to live on; having access to education; having adequate toilet facilities; finding a way to start a business; transportation; and accessing electricity (Government of Vanuatu, 2002:63–5). Much the same was true in Honiara, with settler households concerned over crime, anti-social behaviour and inadequate infrastructure (especially water and sanitation) and seeking improvements in these, alongside better access to education, training and more secure land titles (Russell 2009:19–21). Clearly in urban Vanuatu and Solomon Islands, as elsewhere in the region, many basic urban needs remain unmet.

Though based on small samples, a number of recent surveys from the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the Ecumenical Centre for Research, Education and Advocacy in Fiji (ECREA) and academics in Fiji have pointed to the following trends. First, approximately 80% of those living in informal settlements in Suva fall below the 'poverty line' (although this is an estimated figure); secondly, average incomes in settlements were \$90–100/week, even though at least one adult was working full time and most families had a second source of income; thirdly, urban poverty is increasing with migration and growth. In 1997 urban poverty was estimated at 28% of the population, in 2002 some 29% of urban households fell below the poverty line and figures released in 2006 estimate that between one-quarter and one-third of urban populations continue to live below the poverty line. Again, these data point to the considerable extent of urban poverty, even in a country that has experienced positive economic growth for much of the past decade.

Urban poverty in the region's microstates is also related to low incomes and high rates of migration, which in turn have resulted in overcrowding. In South Tarawa those living below the poverty line (like those in Majuro) had a household average of 11.7 persons compared to families above the poverty line with 7.7 persons/household (ADB 2002:68). One indicator of poverty and vulnerability on Tarawa is the comparative lack of food security. As a reflection of the lack of space, but also knowledge and essential tools, I-Kiribati on Tarawa are increasingly dependent on the monetary economy and imported food.

Although there is a need for more quantitative research on urban poverty, poverty cannot be adequately measured through statistics alone. In Fiji, despite its relatively high level of economic and human development, findings from the 2002 participatory assessment on hardship indicated increased poverty, especially chronic poverty, in the city's growing urban squatter settlements. But the poor expressed equal concerns about urban unemployment, governance, declining standards in the delivery of basic services and a lack of economic opportunities. Poverty is also a poverty of opportunity.

Urban poverty bears some relationship to internal migration since it is evident, at least in Papua New Guinea, but almost certainly elsewhere, that the urban poor are often those who have migrated from the most impoverished rural areas (such as remote areas on the fringes of the highlands). People are thus moving away from rural poverty, in the sense of inadequate access to employment and income-earning activities, and to services, yet migration thus tends to transfer poverty to urban areas.

In many rural areas, especially in Melanesia, village life is very limited in terms of access to services (health, education and transport), housing provision (with most houses being made of traditional materials), so that the primary goal of many rural residents is superior housing and an education for their children that will enable them to move away from rural poverty, drudgery and economic insecurity (e.g. Connell & Hammond 2009), access to clean piped water and electricity, let alone sewerage and garbage disposal systems. With all their apparent disadvantages urban centres offer a very powerful illusion of development to many rural residents, and expectations are rising.

In almost all Pacific Island countries urban poverty is a growing problem. The concerns of the poor go beyond income and encompass the desire to have access to urban infrastructure and services, notably education, water, sanitation and electricity, and to be able to have a say in urban affairs. However, while the poor demand more services and infrastructure they can rarely pay for it. The growth in urban poverty is likely to become the most important development in the Pacific over the coming decade and threatens progress towards the MDGs. Adequately responding to urban poverty requires an understanding based on holistic and multidimensional

indicators. Urban poverty is more than just an insufficient income; it also includes lack of services and opportunities, poor living conditions, difficulty in meeting basic needs and a lack of representation in the decision-making process. Rarely do studies, particularly official data, capture the multidimensional nature of urban poverty or adequately represent the voices of the urban poor.

Youth

The burdens of unemployment and poverty may fall most heavily on youth (but also on the aged), who may also have higher expectations of urban life. Because of the youth bulge, where a very large proportion of urban populations are aged under 25, school leavers experience significant problems in gaining access to employment, or further education and training, and their access to recreational facilities or institutions is restricted. Lack of such forms of access contributes to boredom, frustration, household tensions and sometimes anti-social behaviour, substance abuse (and illegal substance production) and crime. (In parts of Polynesia this has been exacerbated by the deporting of migrant criminals from receiving countries such as the United States and by the repatriation of dissident youth by families intending that they absorb appropriate 'island ways' at 'home'). There is an almost inevitable marginalisation of the majority of youth.

Youth have exceptionally high unemployment rates where this has been measured. In Tarawa (Kiribati) some 60% of youth are unemployed. In Solomon Islands unemployment rates range from 75% for 15–19-year-olds to 49% for 20–24-year-olds (Jourdan 2008). These rates are probably typical of many other urban centres and national populations. Locally, rates may be even higher, especially in settlements where residents may be discriminated against for employment in the formal sector. Since many of the urban unemployed are long-term urban residents, even where there is significant capacity, rural areas cannot absorb such populations (who have lost touch with their ostensible 'roots') and few are willing to 'return' there.

A qualitative research project in the late 1990s gave some insight into the lives and expectations of Vanuatu's urban youth. More than 1,000 young people between the ages of 13 and 25 years were interviewed in settlements and in public places around Port Vila, resulting in a book and video, *Kilim Taem* (Killing Time), documenting their lives. The report found that half of the youth were born in Port Vila, almost one-third had never been back to their 'home' island and the majority had not attended secondary school. Among this group many felt that they had 'failed' the system without getting the necessary skills to find good work and felt that employment was their main problem. A large proportion of responses indicated they would like to start their own business; many felt that learning kastom (and church) offered some security, and a sense of belonging, thus making 'killing time' more bearable. Most youth were unaware of basic health and sexual reproduction issues, and young people lacked information and knowledge about facilities and opportunities available to them (Mitchell 2004). In small part some of these needs have recently been met by NGOs, which have developed sporting facilities, health clinics and training courses for youth but, by their own admission, they still meet only the growing needs of Port Vila's youth, and this despite the established presence of the formidable Wan Smolbag NGO, one of the most effective and long established NGOs in the region. Broadly what is true of youth in Port Vila is relevant elsewhere in the region, as school leavers fail to find formal sector jobs and experience frustration, often leading to increasing levels of alienation and growing problems of urban crime.

While NGOs like Wan Smolbag, ECREA, and the Foundation for Women and Children at Risk (WeCare) in Port Moresby, have made a significant contribution to urban wellbeing for the marginalised, there are limits to what they can achieve where employment opportunities are desperately scarce, migrants may have inadequate skills to compete for the few available jobs, and the market for the goods and services of an ever expanding informal sector is finite. As a Catholic priest in Port Moresby has recently remarked of city youth: 'They have no jobs, no hope, no sense of dignity and pride, and the result is they feel they do whatever they like to get by, to get another meal, to get a few kina in their pocket. It really is a lousy situation' (quoted in Chandler 2009:15). Remarkably few urban centres offer any significant provision of public recreational space, beyond a few pathways close to sea shores, and more formal recreational space (for sports such as football) is very limited.

A series of projects being developed in the region focuses on youth employment and post-secondary education to try to reduce unemployment levels and alienation amongst youth. Projects such as the World Bank's Urban Youth Employment Project, being launched in 2009, are typical. In this case the program seeks to provide training for 17,000 youth in Port Moresby, but whether there will be employment for such trainees at the end of their training is doubtful, and whether such programs will encourage rural–urban migration is equally uncertain.

Other programs, such as the Rapid Employment Program in Solomon Islands, are aimed at providing short-term employment for as many as 3,000 youths in Honiara, but this may last for no more than a few months, or providing 'second-chance education'. Again real opportunities need to be available at the end of such programs, otherwise expectations will be dashed.

The social city

Towns and cities are anything but homogeneous, above all in Melanesia, where there are significant social and economic divisions at different scales. The social and spatial organisation of most towns and cities at least in part follows traditional social structures and divisions (which, in themselves, make planning more difficult). Ethnic and regional divisions and traditional power structures are of pervasive importance, and though class divisions have been reported (Gewertz & Errington 1999) they are yet to be of real importance for urban life. Socialisation in urban areas often leads to marriages between different ethnic groups, which can lead to tensions, and also enhances urban permanence. Urban social areas may be socially distinct from neighbouring areas, and though they may be a 'secure entry point' for new migrants to the city they impede broader urban relationships in a social and spatial sense (Storey 2008). The institutions that enable broader social relationships to emerge are few and, like churches, are now less important and more fragmented than in earlier years. In Melanesia especially, social divisions and tensions are a major constraint to movement towards urban sustainability (Connell & Lea 2002).

Crime and disorder have become more visible in recent years, evident in the looting and destruction of Nuku'alofa's city centre in 2006 and the burning down of Chinatown in Honiara in 2006, though crime also exists in rural areas. Petty crime is more likely to be an urban phenomenon. Social disorganisation and crime are a function of substantial inequalities in access to land, housing and other services. Port Moresby has been declared to be the most unlivable city in the world, because of the extent of crime and violence, much of it fuelled by problems of lack of access to urban resources. Over two-thirds of all households in Port Moresby stated in 2005 that they had been the victims of crime over the previous twelve months (NRI 2006) despite security measures such as the construction of walled and defended compounds and the hiring of guards. The extent of crime and insecurity is, however, higher in several provincial towns and cities, mainly along the Highlands Highway, where there are fewer economic opportunities and where policing is often absent. Crime has substantially raised the cost of establishing businesses, especially in Papua New Guinea, and discouraged tourism. Similarly there has been a rapid rise in such crimes as domestic violence (Connell & Lea 2002). Storey (2008) has argued that 'failed cities', evident in their high crime rates, may be precursors to failed states.

Some PNG criminals themselves, the euphemistically titled *raskols*, have pointed to crime as being a response both to inequalities and to their perceptions of corruption and white collar crime being unpunished. Indeed it is evident that almost everywhere in the region there is considerable and rising corruption, most evident within the political and bureaucratic systems (Larmour 1997), and where there has been extensive pressure on judiciaries, police forces, governments and ombudsmen to ignore particular 'high-level' crimes. Quite recently the FSM Congress sought to pass a bill that would afford an amnesty to those who had misused or misappropriated government funds. Other governments may have been less blunt but they have rarely been willing to use the full force of the law to punish the corrupt, circumstances that may be a function of both small size and the partial retention of traditional structures of governance.

Social disorganisation may be a function of the lack of 'traditional' leaders in urban areas, or their inability to exercise authority in new settings, and the lack of authority of 'new' leaders (such as the police forces). The effect has been, in a number of places, to create uncertain divisions of responsibility (for example, in Vanuatu between traditional and modern leaders notably in response to the deterrence and punishment of crime). Simply because it is recent, it is worth drawing on a leading article in the *Solomon Star* to indicate some of these kinds of issues:

The break-in at the home . . . testifies yet again to the spate of robbery incidents rocking our town in recent weeks . . . There were expatriates and businessmen who were attacked and robbed in similar fashion by heartless thugs in recent weeks. This new criminal trend poses a real threat to the peace and safety of Honiara's residents. And unless it is curbed now, Honiara will not be a safe place to work and live . . . But the saddest part to it all is those involved are mostly youths, some as young as 12. This is not a good sign for this country. Where are the parents of these young people? Where are the church and community leaders? Are they playing their role as guardians of these youths? The situation also underscores and highlights the need to spread development across the country. Now very young people

just want to move to Honiara. They believe life is in the town. The Government talks so much about rural development. But very little is seen down there. This is why these youths are flooding to Honiara. It's a problem that grew out of the unbalanced and centralised development that we're seeing here. (2 October 2009)

Somewhat similar statements could be made elsewhere. In Honiara one outcome has been that some parts of the capital have effectively become no-go areas for those without business there (a situation true of several PNG towns). It emphasises familiar patterns of the breakdown of traditional family and leadership structures (including the established churches) and the absence of replacements. Such problems exist even while RAMSI seeks to maintain order and stimulate a more balanced development.

In Papua New Guinea there has been a 'pervasiveness of sexual assaults and gang rapes' and this impersonal and institutional violence against women, even among groups such as the police, has direct implications for the increased incidence of HIV (Lepani 2008:150, 156) and for the breakdown of family structures (Wardlow 2004; see below). Despite international angst, most crime is targeted against local people and may merely accentuate problems of deprivation; as the PNG *Post Courier* has recently railed:

The news that the distribution of treated mosquito net bedding has come to a halt because of gangs in Lae is so discouraging. It seems to be one more sign of a breakdown in public spiritedness and cooperation in most of our cities and towns . . . However we must look to the leadership of these settlements and the poorer suburbs of the cities. If there are leaders they must stand up and show their qualities in such situations. These nets were going . . . to the attackers' own wantoks and friends. Now they won't get them and they will remain at risk of catching malaria and all the attendant woes of that disease . . . You're biting the hand that feeds you. (20 August 2009)

At times of economic crisis and accentuated hardship violence turns inwards, and local people bear the brunt of such problems. Thus in 2007 three people were killed in Blacksands (Port Vila) as the outcome of tension between two migrant groups from different islands. Accusations of sorcery between them spiralled into more serious violence (leading to the arrest of 140 people). Frustration has varied outlets.

Crime and anomie derive as much as anything else from uneven development and relative deprivation. Consequently, and unsurprisingly, settlements are widely perceived to be haunts of the feckless unemployed (though there is little evidence of this being particularly prevalent), where a significant proportion of employment is in the informal sector (and this is rarely regarded as appropriate or genuine employment by elite urban residents), and a correlation between urban crime levels and recent migration is frequently voiced but also lacks demonstrable proof. There is no evidence that crime levels, or gang membership, are more obviously correlated with settlement residence (Goddard 1992, 2001; Nibbrig 1992). Many youths join gangs to gain a sense of belonging and an urban identity. It is probable, however, that social disorganisation and crime are a function of substantial inequalities in access to land, employment, housing and other services in the largest cities. However, the organisation of criminal activity may also be closely related to social organisation, especially in Melanesia, so that explanations of criminal activity that focus on unemployment, inequality and poverty are limited in explanatory power (e.g. Goddard 1992; Keesing 1994).

In Papua New Guinea especially, opposition to urbanisation has continued, from both urban authorities and influential leaders (Connell & Lea 2002; Goddard 2001; Koczberski et al. 2001) in the guise of achieving order and cleanliness, reducing crime and unemployment, freeing land for business development, and demonstrating that the state was not weak. Violence and destruction—against settlements—have become instruments of urban planning as urban problems become increasingly complex and unmanageable. As recently as September 2009, a large part of the settlement of Five Mile (Port Moresby) was bulldozed into oblivion by the police, under the guise that it was illegal (as were the stores and gardens established there) after there had been three murders in the settlement. At much the same time the removal of other settlements in Goroka was ordered on the grounds that they were potential breeding grounds for cholera, dysentery and influenza (*The National*, 21 September 2009). Moral panics and achieving 'moral order' take different forms.

At the very least, contradictory approaches to issues of poverty and squatting, for example in Fiji, have meant that successive governments have introduced policy that has alternately attempted to remove squatters, supported and condemned non-government efforts, and upgraded settlements. The then Minister of Housing in Fiji commented in 2006 that 'the more than 10% of the country's population who are forced to survive as squatters are like thieves because they live illegally on someone else's land . . . and police should make every effort to round them up and remove them' (*Fiji Sun*, 26 September 2006, quoted in Bryant-Tokalau 2008). Intermittent ambivalence, and weak urban and national governance, has meant that even though there has been

an enormous amount of debate, it has not been possible anywhere to formulate an effective policy to discourage, remove (or even upgrade) squatter settlements. By contrast to the widespread opposition to urbanisation—at least in the form of settlements—there has been minimal support for the rights of settlement residents, other than from themselves, and from some NGOs such as ECREA. Meanwhile, the pervasive opposition to urbanisation has delayed and discouraged the development of coordinated plans for urban management, a strategy intended to contribute to the reduction of urban development problems. Ironically, there is no evidence that it has either slowed rural–urban migration or reduced crime levels.

The urban environment

The combination of growing urban permanency, high unemployment and increased expectations has put considerable pressure on urban services. Most urban areas have been unable to provide adequate services, evident in the housing stock, but also true of water, sewerage and garbage disposal. Environmental degradation is usually greatest in and around urban areas (and mine sites). Opposition to squatter settlements, and inadequate finance, have meant that there have been no effective urban development plans and programs that develop effective urban management policies.

Pacific cities are increasingly unhealthy and dangerous places to live, a trend noted at least two decades ago (Bryant 1993). Although some progress has been made in terms of health facilities and awareness, some Pacific cities, particularly the microstate capitals Majuro (Marshall Islands) and South Tarawa, face periodic threats of cholera and other water-borne diseases. In mid-2009 Lae (PNG) experienced a cholera outbreak, later to spread elsewhere, especially in settlements where access to clean water was limited and understanding of mechanisms for the spread of cholera was not good. Infant mortality rates, often as a result of diarrhoea, remain high in microstates such as Kiribati, as do communicable diseases, in large part aggravated by overcrowding. Pacific cities are invariably close to water sources and the continued health of rivers, lagoons (for example in Port Vila and Nuku'alofa) and the sea is critical for human well-being. Most water pollution is organic, though more hazardous forms of industrial water pollution may pose a greater threat in future. Increasing urban densities, and greater mobility, pose new risks for the spread of infectious disease (and fires), which may prove an almost insurmountable challenge for inadequate infrastructure and services.

One particular health issue is of growing regional concern, especially in the larger cities. In general, global HIV infection rates have tended to be higher in urban areas. This holds for Papua New Guinea, where 2004 estimates noted that HIV prevalence is 3–4% in Port Moresby, well over 2% in other *urban* areas, and 1% in rural areas. This may well be even truer of other Pacific urban areas. Urban areas are associated with certain HIV risk factors, related to higher and more anonymous rates of social interaction. It has been well documented in Papua New Guinea how the rise of HIV has been closely linked to the emergence of a newer group of people 'mobile men with money' (MMM) who characterise larger urban areas and are even personified as a new kind of 'sugar daddy—the *dakglas kar man* (dark glass car man): businessmen, landowners and politicians with plenty of disposable income (Connell & Negin 2009).

The increase in settlements in most urban areas in the Pacific is of particular concern. Where poverty is relatively high and services are less available there are greater risks of HIV vulnerability. This has also been seen in slum areas of East and Southern Africa where transactional sex, poor health indicators and inability to negotiate safe sex are more prevalent. In Papua New Guinea at least, infection rates are particularly high in urban areas and amongst young girls and women, indicating that such adolescent girls and young women are particularly vulnerable to cross-generational sexual relations (Lepani 2008:151). The role, geographical distribution and social significance of sex work are of considerable significance in the spread of HIV. Though most data are anecdotal, the selling of sex for cash is significant in many parts of the region, spearheaded by Papua New Guinea, Fiji and Solomon Islands. Commercial sex work is often informal and sporadic and largely transactional in nature rather than a full-time situation. Most commercial sex workers are women. Exchanging sex for goods or money is not necessarily a new phenomenon. A relatively small number of studies provides some information on prostitution, but much of it is dated and it refers primarily to Papua New Guinea.

With the exception of the Highlands Highway (PNG) almost all prostitution is centred in the larger cities and towns, especially where these have a significant port function. In Honiara and Tarawa women tend to meet fishermen and sailors in port areas. In several port towns, including Suva and Majuro, and also port towns in Papua New Guinea, Chinese sex workers have been brought in to service Asian seamen and fishermen. While

Asian prostitutes in Fiji tend to be organised in brothels, local sex workers are found in diverse locations, on particular streets and in certain clubs. Commercial sex workers are in many cases urban migrants themselves and rarely practise their business in their home communities, except in the larger cities. There is a growing recognition, first, that the general age of sex workers is becoming younger, and secondly that the principal influence on women becoming prostitutes is poverty, alongside a fragmented household structure. In the case of Fiji, Save the Children has recently reported that girls as young as thirteen are engaged in prostitution. In most contexts there is relatively little information on how sex work is organised, or indeed whether it is organised (though massage parlours are becoming more common), who the sex workers are (their ethnic origin), their incomes, whether they are long-term or temporary workers (and whether they drop in and out of urban life) and their health status. They are, however, a significant part of the urban informal sector.

Urban nutrition is a serious problem in many cities because households (especially migrant households) grapple with limited access to garden land, low incomes limiting access to local produce (which can be expensive) and the rapidly rising cost of imported foods (including staples such as rice). In many urban centres, and in settlements, rice has become the dietary staple even to the point of being psychologically important as a measure of earnings and self-worth (Russell 2009). Imported foods pose nutritional problems and have enhanced extremely high levels of NCDs, alongside greater sedentarism (as employment structures change and there is minimal access to agriculture, fishing or recreational facilities), and higher levels of alcohol, soft drink and cigarette consumption.

In terms of more 'traditional' environmental issues, South Tarawa is particularly vulnerable to environmental degradation, and other atoll towns face similar challenges. The urban population of Tarawa is under constant threat of epidemics and diarrhoea remains common. An ADB project to draw water from a fresh lens source in North Tarawa is now under threat through population growth expanding onto the reserves. Projects to develop stable sources of potable water and deal with sewerage and sanitation are being driven by donors, but eventually government will be required to take greater responsibility for this infrastructure and provision. Some local officials describe the environment around South Tarawa as like 'sitting on a time bomb' in terms of living standards and the impact on the environment. The key environmental issues faced in Tarawa are considerable and include groundwater depletion; increased salinity and pollution from sewage and animal excreta (around one-third of South Tarawa's population use beaches as toilets); marine life and seawater contamination from human and solid waste; over-fishing of reefs and lagoons; non-degradable waste disposal; coastal erosion, beach mining and deforestation eliminating sources of food, medicine and habitat and increasing the vulnerability of coastlines; and breakdown of traditional subsistence production, resulting in poor nutrition and health-related problems (ADB 2002:28).

South Tarawa may have a reticulated sewerage system, but this is not available to a growing number of informal settlements and therefore has not solved problems of open defecation. Most sewage and solid waste continues to be disposed of along the waterfront and green belts and water catchments have been replaced with housing. Residents in squatter settlements on South Tarawa were more likely to dump solid waste, use the beach as a toilet and use dirty water for drinking as a result of being cut off from infrastructure and services (Teiwaki et al. 2005). Water and sanitation facilities are provided only to those on public land (predominantly housing corporation homes) and 'private' households are required to pay for their own connections. The majority of these cannot or choose not to pay for this service and end up dependent on wells and rainwater and basic toilets or squatting on the beach. Given that almost all new housing stock in Tarawa is now informal and 'illegal', and treated as such by authorities, this is cause for concern. Water quality is a significant problem, as is the defoliation of the atolls to make way for housing. Lagoon pollution, in part exacerbated by the closing of the lagoon for causeways, is of increasing concern and threatens public health. The garbage collection system has been only partially successful. Much of the urban area is still plagued by garbage and the country still does not have legislation to deal with solid waste management or pollution of the lagoon. Similar circumstances are also emerging in Funafuti (Tuvalu) and in the Marshall Islands, causing repeated environmental management problems.

Environmental stress is not restricted to microstates. In the mid-1990s only about 40% of Fiji's urban population had adequate access to water, proper sanitation facilities, and waste collection services (World Bank 2000:8). In Honiara nearly 30% of the poorest households rely on unsafe water sources and have no satisfactory sanitation system, while 49% of settler households cook on open fires, hence firewood, sawdust and kerosene (for cooking and lighting) are important consumer goods (Russell 2009:15). Even facilities that are in place are poorly maintained and depend upon aid budgets. The growth of peri-urban and informal settlements will make more

extensive provision difficult. Levels of solid waste creation per capita are increasing in many of the region's cities but the machinery of collection and disposal is rarely keeping pace. An ESCAP/POC study of informal settlements in Nasinu (Suva) showed that only 19% of households had their rubbish collected while 52% of households either burned or buried their rubbish. Fully one-fifth of households reportedly threw their rubbish into a nearby river or dumped it on nearby land. The study consequently warned that environmental and health conditions in informal settlements were degraded and deteriorating with growing populations (ESCAP/POC 2002). In addition to such well-known environmental threats, Suva now faces an increased problem of hazardous waste disposal and air pollution. Most cities struggle to find (and manage) dump sites and the disposal of toxic and hazardous waste is a major issue, especially in atoll states, where dump sites are particularly hard to protect.

Similar trends are also found in urban Vanuatu. The Port Vila Municipal Council does not collect any solid waste from informal areas, which constitute the largest and fastest growing areas around Port Vila. Informal settlements depend on shared pit toilets, sometimes very close to water courses and subject to flooding. There is no public service provider for sanitation and there are no sanitation master plans for either Port Vila or smaller towns. A lack of infrastructure provision in peri-urban areas in Vanuatu means that households depend upon rain water and wells, which are increasingly susceptible to contamination (pollution of the aquifer, leptospirosis and vector-borne diseases in rain water) (Government of Vanuatu 2002:25). Without positive intervention, environmental conditions in informal settlements will deteriorate and threaten the health of residents and ultimately environmental and health conditions in the wider urban area.

The rapid spread of cities into agricultural hinterlands is also creating a wider urban footprint with resulting environmental impacts. One example of this is the impact of peri-urban areas on the Tagabe catchment area, which covers twenty-five square kilometres to the immediate north of Port Vila and is a key source of water for the city. It is now under significant pressure from rural runoff, industrial wastewater, and informal settlements, but authority for the river is divided between Efate, the Port Vila Municipal Council and a number of customary landowners. The catchment is under threat from a range of developments but solutions, if they are to be effective, require interaction between formal and customary institutions. Though there is movement to create this consensus, dealing with pollution and use of the catchment is a complex and time consuming process, especially with divided ownership (ADB 2004). Often pressures on peripheral areas result from the extension of urban food gardens, hunting and firewood collection, and even cemeteries (and burials are increasingly randomly located or close to houses).

As urban lifestyles change and consumerism increases, the amount of inorganic waste and general waste generation per capita is increasingly putting coastal and fragile ecosystems under pressure. The capacity to collect, sort and dispose of solid waste is stretched thin in many urban areas. In the Marshall Islands the Majuro Atoll Waste Company actually declared a State of Emergency in May 2008 due to the shortage of waste bins and the lack of financial resources to service urban centres and safely dispose of waste. Dealing with these issues will require both technical knowledge and materials in the form of planning and infrastructure, but equally so, traditional authorities have an important role to play. An example of this is also found in the Marshall Islands, where *alaps* (traditional land managers) have been encouraged to develop their own approaches to managing and enforcing controls over waste in their areas (ADB 2004:31). The role of traditional leaders is also applicable to the servicing of peri-urban areas in growing Melanesian and Polynesian cities.

Environmental services never have policy priority. Increasingly, the key problems are in urban areas—the 'brown' issues of air and water pollution and traffic congestion. Equally problematic in urban areas is access to services. In most places rapid urbanisation, and even not so rapid urbanisation, has overwhelmed infrastructure service provision and any sense of orderly planning for entire urban areas. Waste burning contributes to pollution in many cities especially in Melanesia, and growing traffic congestion—and diesel fuel—have become irritants in the larger cities. In both Port Moresby and Suva, the two largest cities in the region, access to water cannot be taken for granted (though Suva lies in one of the wettest parts of the region) as infrastructure rusts into oblivion through not being adequately maintained. Similar problems intermittently affect electricity, sewerage and garbage disposal; however, access to transport services is generally good, perhaps partly because this is largely privatised. Poor management of municipal waste collection (and vehicles) results from lack of adequate funding and management (simply 'good housekeeping') and other factors (including access to appropriate land). Poor educational standards, limited knowledge (and capital) and few realistic alternatives result in dumping of waste in river systems, and on roadsides and coasts.

Despite the visibly emerging challenges, levels of environmental awareness in urban areas are low (including knowledge of global warming) and environmental issues are not of great political or community interest. A host of environmental reports and workshops over the past decade appears to have resulted in little concerted action. In a recent survey more than a third of people in Kiribati identified the sea as an acceptable place to dispose of waste while almost a third of Tarawa residents did not recognise that waste was a problem. An estimated one-fifth of Suva's residents also dump their rubbish in waterways or in other public spaces and see this as an acceptable use of vacant land. Developing policies and programs to remedy such practices is a considerable challenge.

Urban management

Within countries there is at best ambivalence towards migration and urbanisation. In Melanesia there are major concerns over perceptions of excess migration to urban centres and often draconian policies directed to reversing migration flows, notably in Papua New Guinea, but also in Vanuatu and Solomon Islands, and open hostility to the informal sector throughout the region. Since such practices address the symptoms of largely rural development problems, rather than their causes, they have done little to slow migration. Policies that focus on decentralisation and regional development are largely things of the past (Connell 1987) as countries exercise a more limited role in policy formation, and the possibilities of decentralisation are few. Without more effective broadly based rural and regional development policies none of this is likely to change.

Throughout the Pacific serious questions challenge the efficiency and effectiveness of urban agencies in their response to the important and pressing issues facing the region's cities. In part this is because urban areas straddle modern and traditional authority, which is most evident in conflicts over land and resource management (Chung & Hill 2002). Both Jones (2003) and Storey (2005) have suggested that urban governance will be one of the most important issues facing Pacific Island countries this century. Clearly authorities are struggling to cope with the patterns and rates of urban development with respect to the resources at their disposal. Partly this is to do with the diffuse nature of urban development, but also with issues of governance. Thus the state has largely abdicated any responsibility within the housing arena (and pressures for privatisation and more general movements away from public intervention make renewed vigour unlikely). The end result is that many 'decisions' about urban development and growth that are being taken occur outside the policy and legal apparatus of the state, and are the outcome of a host of individual decisions. The coordination of urban planning is particularly complicated by the growth of urban settlements on customary lands. Partly through the inability, or unwillingness, to resolve such issues and the inability to manage the practice of development, in effect the state has retreated from what have hitherto been perceived to be its traditional responsibilities. Consequently there has been growing pressure for the restructuring of government structures, in attempts to ensure the more effective development of policy and provision of services.

Few if any countries have effective structures of urban government and management and some have none at all. Even in countries where urban authorities have been established, they have often struggled with funding, competition and lack of effective authority (Jones & Lea 2007). In the face of more spontaneous changes, and popular support, they have been largely ineffective. The inability to plan and control land use is well evident in Nuku'alofa, where the razing of the CBD provided an opportunity for an innovative new town centre but only haphazard piecemeal development ensued. There have been what might be described a tentative breakthroughs; there is a broadly based Pacific Urban Agenda with sweeping goals, Papua New Guinea has developed an urbanisation plan, Samoa established PUMA (the Planning and Urban Management Agency) while Tonga has sought to establish the Tonga Integrated Urban Development Project, but few initiatives have been comprehensive or genuinely integrated. There is an urgent need to work with both landowners and settlers (and the informal sector), extend infrastructure much more equitably, and to mobilise and service land (the old 'site and service' format) but none of this is cheap, easy or quick, and there are no significant and powerful national institutions (and sometimes nothing at all) dedicated to such goals.

While limits to the authority of institutions in part explain their weakness, many key agencies working on urban issues in the Pacific lack the necessary skilled staff to work effectively. This applies to those working in formal government structures but also to traditional authorities. Throughout the Pacific there is a lack of qualified urban specialists. There is a clear and urgent need for increased training of planners and professionals if more consistent urban policies and more effective practices are to develop. (Similar statements might just as easily be made about skilled health workers and many others). Ultimately, quite simply, Chung and Hill (2002:47) have

noted that 'Vanuatu currently has no specific national planning policies or strategies for managing present and future urban growth, and little capacity in either the public or private sector for this task'. What amounts to an epitaph for urban policy and management could just as easily be written for several other countries.

While one response is to strengthen government agencies to deal better with urbanisation there is also a strong case for better equipping indigenous leaders and institutions to deal with decisions relating to land, urban development and informal settlements. Community-based planning does have potential in the Pacific. In Palau, traditional authorities play the role of 'advisors' to the more formal system. Community consultation and participation in urban planning have been adopted in Kiribati and Samoa (Jones & Lea 2007). Efforts to include disparate ethnic populations and the poor and marginalised are critical in building relationships and involving all urban citizens in decision making and planning. Almost all the available global evidence supports the notion that by involving more people in government and management a greater degree of equality and equity will be achieved, which in turn will contribute to a more broadly based development at a national and urban level (Wilkinson and Pickett 2009). While the city is a collective space there is enormous inequality within this space, and recurrent processes of marginalisation rather than inclusion. Tensions mount where some are persistently excluded. Moreover, in looking at towns through a more strongly indigenous lens urban places and issues may be seen quite differently, and often more positively. As one example the Malvatamauri (National Council of Chiefs) in Vanuatu has recently encouraged chiefs to take part in training courses to raise their level of awareness and capacity in development issues. It also wishes to create an urban council of chiefs to act as advisors on peri-urban land and social issues, and play a more proactive role in urban governance in general, providing a positive example of capacity building in this area.

No single institution or agency (whether government, donor, or NGO) has the capacity to address comprehensively the needs of urban development in the region. This implies the need for strong communication and effective linkages. However, relationships between key institutions are characterised by the absence of coordination and a lack of inter-institutional awareness and communication. A University of the South Pacific initiative that involved bringing together government departments to talk about urban housing concluded that a panoply of initiatives existed but these were divided into various ministries with limited knowledge and interaction between them. Also noted were the predominance of top-down solutions and a lack of community consultation. Few residents are aware of what is provided by government welfare agencies, NGOs and other support agencies. There are few mechanisms for most people to participate in any issues relating to urban development.

Nevertheless, it is through local, rather than central government that stronger relationships with communities are more likely to be forged. In recent years there has been an increased focus on finding ways in which local government could play a more important role between the state and civil society in the Pacific. There is, however, much work to do before decentralisation to local authorities results in anything more effective than what central government may offer. Local government has struggled to build effective relationships with communities and has not always demonstrated any greater capacity or willingness to meet the needs of urban populations. Moreover, urban populations generally have a low level of understanding of local government. Despite the need and potential for a greater role, local governments have a weak resource base, lack human and financial resources and are rarely able to act autonomously of central government.

Even in countries where there have been concerted efforts to deal with urban problems alongside urban management, success has been limited. Thus in Kiribati, despite a series of attempts at more effective urban planning, concern has been expressed about the long-term commitment to change. With regard to urban planning and land, actual implementation of plans has been weak given their implied and actual confrontation of traditional leadership and land ownership patterns. Capacity building efforts, primarily in urban land administration in the late 1990s, were considered a success but questions remain over the sustainability of the gains (Jones & Lea 2007). Many initiatives have simply been overwhelmed by the day-to-day focus on survival, and the lack of effective on-going administration. A further difficulty that urban management faces is that while cities are places where power resides, rarely is political power and legitimacy *derived* from the city. There remains an urgent need to create effective partnerships transcending 'modern' and 'traditional' structures if cities are to not become chaotic, sprawling places that are impossible to manage. Ultimately, harmonious urban life demands urban and national economies that generate adequate incomes to enable and sustain proper infrastructure provision, but also balanced development between urban and rural areas.

An urban future

Sustainable properly managed cities demand successful economic development. The challenge for economic growth remains the need to: create employment for growing populations with rising expectations; cope with international fluctuations in demand, trade and economic growth; restructure and diversify domestic economies; and achieve greater international competitiveness. For most countries that means a continued focus on agricultural development, fisheries and tourism, few of which have fared well in this century. From the 1990s several states have faced economic and political crises. Such crises have affected economic development, expressed or intensified ethnic tensions, stimulated emigration (even from countries like Solomon Islands and Vanuatu, where it was previously absent) and discouraged foreign investment.

The Pacific faces an uncertain urban future. Social disorganisation and crime increasingly result from inequalities in the cities and have grown in concert with the increasing size of urban populations. In Nuku'alofa and Honiara (and also Papeete and Noumea) there have been riots over inadequate urban employment and quality of life. Security concerns among the elite are prevalent in Port Moresby and accentuate topographical divisions in the city, with the better-off occupying the higher ground. In this way neocolonial towns have begun to revert to something akin to the segregated colonial outposts of the past, with an increasing separation of the elite from the poor and a reluctance to 'share the city' (Connell & Lea 2002). It would be misleading to suggest that the situation characterising Port Moresby is found everywhere in the urban Pacific, but increases in poverty, crime and periodic unrest can be seen in towns and cities as diverse as Lae, Nuku'alofa and Suva. Social and economic divisions are more apparent and are usually spatially demarcated; urban unemployment, along with social disorganisation and crime, has risen, alongside the growing visibility of the informal sector; and urban management has failed to cope (Goddard 2005). Even in smaller towns, urban service provision is fragmented among numerous activities. Tension between landowners and migrants exists in the face of land shortages, and bureaucratic ineptitude and political corruption have contributed to division. In the failure to deal effectively with urban futures and in the absence of opportunities for growing populations, in both rural and urban areas, the Pacific is likely to encounter greater political instability and social insecurity in the decades to come.

Whilst uneven development and poverty are evident in several states, few governments recognise their existence, and even fewer have sought policy solutions. Such policies would require long-term rural development strategies, but most governments in the Pacific have failed to develop long-term plans and are bound within limited time horizons—no further ahead, if that far, than the next election. It is thus unsurprising that aid delivery, and external efforts at restructuring, focus so strongly on issues of governance.

The interlocking nature of poverty and governance is clear (O'Collins 1999; Connell & Lea 2002; Abbott & Pollard 2004). Management failure has posed substantial problems of deprivation, and influenced increasing urban crime rates. The rhetoric of self-reliance, at national and household levels, has disguised a situation in which there has been a growing dependence on external sources of funding, whether from aid, remittances or investment. This has, in part, contributed to new forms of socioeconomic inequality in cities. Informal employment is growing faster, as it must, than formal employment, resulting in more complex urban economies—and more complex urban planning and management issues for public services, which are no longer growing. The combination of weak economies, overburdened bureaucracies, urban unemployment, fractured social networks and uneven development challenges notions of sustainable development. Most Pacific Island states are likely to remain weak for the foreseeable future, become increasingly dependent on the wider world and require new forms of external support and intervention.

Yet urbanisation has many positive characteristics and urban areas are increasingly vital to the region's future prosperity and development. Urban life enables some individuals to obtain higher education and technical training and gain access to skilled employment and good housing. Migration may also reduce population pressure on scarce rural resources and, through remittances, lead to an improved quality of life in rural areas. Cities are centres of educational, political and economic power and remain important symbols of nationhood and places of cultural diversity as well as economic opportunity and social development. Translating advantages for a few, and symbolism, into more broadly based urban development is not, however, easy.

It is not inevitable that urbanisation should be unmanageable and that problems should worsen. Strategies emphasising integrated rural development and stressing both economic advancement and social services will be important. However, as more children are born in town and remain there, long-term urban policies and visions need to emerge. The Pacific is now urban. However, future towns and cities in the island Pacific may well be

much larger and more difficult to manage than they are today. As long as urban employment appears more prestigious and city life is perceived as being of higher quality than rural life, population pressures in urban areas will increase. The social, economic, and environmental future of the region depends to a great extent on how successfully these problems can be solved.

Although new attempts are being made in several countries to formulate coherent urban policy, present approaches toward the management of urbanisation are still generally piecemeal and directed toward individual projects and particular towns. Coordination is conspicuous by its absence, a situation directly reflecting the condition of urban government across the region. The future of urban management is also bound up with the ability of urban authorities to become more self-sufficient. The potential for achieving this self-sufficiency depends on income-generating capacity, but economies are weak, taxes and fees are difficult to collect and funding for urban development is hard to obtain. Solutions materialise in episodic and expensive responses to crisis conditions without reference to the wider context of urban service provision. Urban management is often crisis management rather than good housekeeping. This does not augur well for an inclusive, sustainable urbanisation in the near future.

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Urbanisation: fertility, housing, education, health, environment

Kevin Barr

The link between the various items in our topic would seem to be that urbanisation (and increased fertility) in Pacific Island countries (PICs) has put greater pressure on the demand for housing, education and health care and has also threatened the environment.

More and more people have been moving to the towns and cities—especially in Papua New Guinea, the Solomons, Vanuatu and Fiji, which make up over 75% of the population of Pacific Island countries. What were once predominantly agricultural countries are gradually becoming urbanised: 20% of Vanuatu's population is urban and in Fiji, over 50% of the population live in the urban areas. In Tonga, Samoa and Niue people have not so much been moving to the cities in their own countries as migrating to cities overseas—in New Zealand, Canada, Australia or the United States.

Mike Davis, in his book *Planet of Slums* (2006) observes that, following the end of the colonial period, many post-independence governments tended to 'abdicate responsibility for the poor in order to rule in the interests of the local elites'. This, he says, has left a legacy of growing poverty and inequality. Then, when the World Bank, the IMF and other IFIs promoted the Washington Consensus with structural adjustment programs (SAPS) (enforcing the user pays principle, privatisation and the commercialisation of State owned enterprises) the elites strengthened their hold on wealth and power while inequality grew and the numbers living below the poverty line increased. Large percentages of the population found themselves excluded from the promises of development.

We have seen this happen in Fiji and Papua New Guinea. But what is happening in the towns and cities of Fiji and Papua New Guinea is symptomatic of what is happening all around the Pacific. Donovan Storey (2006:1) notes that all Pacific Island states to a greater or lesser extent are undergoing urban transformation. Cities in the Pacific are increasingly at the heart of economic change and income generation, which is bringing about greater wealth and opportunity for some, but they are also the sites of deep poverty, inequality and social tension for others. He predicts that, 'Without action the region's cities will almost inevitably be characterised by slums, endemic poverty and environmental degradation'.

Often the urban infrastructure set in place during colonial days has now become inadequate for the urban expansion required by rapid urbanisation. Roads, housing, water and sewerage, airports—even school and hospitals—are not able to keep up with the rapid expansion of populations. A lack of adequate foresight and planning (as well as a lack of finance) has made it impossible to keep pace with the needs of growing numbers and the requirements of basic infrastructure and services.

Having noted that all Pacific islands are undergoing urban transformation, Donovan Storey (2005) takes note of general characteristics of the way urban areas in the Pacific are developing:

- population growth and migration to the urban areas with limited out-migration opportunities
- an inadequate supply of affordable housing
- an acute shortage of affordable land
- the rapid increase of self-help informal or squatter settlements
- inequality, acute poverty, unemployment or employment mostly in the informal sector
- increasing and severe limitation of services and infrastructure
- increasing crime and violence
- worsening unhealthy environmental conditions.

Most of those who come to the cities do so for three main reasons—to find employment, for the education of their children and for better, more easily accessible health care.

ADB studies of Pacific nations

Between 2000 and 2004 the Asian Development Bank (ADB) conducted participatory assessments of poverty and hardship in a number of Pacific Island Nations—Papua New Guinea, Marshall Islands, Samoa, Vanuatu, Fiji, FSM, Tonga and Tuvalu.

The Pacific definition of poverty (and hardship) used was:

an inadequate level of sustainable human development manifested by the lack of:

- access to basic services such as primary health care, education and potable water
- opportunities to participate fully in the socioeconomic life of the community
- adequate resources (including cash) to meet the basic needs of the household or the customary obligations to the extended family, village community, and/or the church.

In Fiji and Papua New Guinea poverty was accepted as a serious concern while in the other Pacific Island nations hardship was acknowledged as a common, widely shared condition. Hardship (a euphemism for poverty?) was seen as a result of having no regular wage earner or of earning poor wages for their labour. Hardship was also seen as the result of poor education, the lack of access to land for food gardens, poor access to good water and sanitation, poor health and living alone or dependent on others.

The summary study entitled *Hardship and Poverty in the Pacific* (Abbott & Pollard, 2004) noted:

The communities surveyed recognized that there are growing numbers of disadvantaged people who are being left behind as national economies expand and become more monetized and as traditional ties weaken. These concerns were remarkably consistent not only between the urban and rural areas within each country but also across the region . . . Micronesia, Melanesia and Polynesia . . . The causes of poverty and hardship centre around the need for income, the need for a reasonable standard of basic services, and the need for skills to meet opportunities and challenges as they become available.

Currently, at least 40% of Fiji's population are living below the poverty line.

The Pacific region and the Millennium Development Goals

The UN Millennium Development Goals cover many of the areas we are dealing with in this session—poverty, education, maternal health care, child mortality, HIV and AIDS, gender equality and the empowerment of women, and environmental sustainability. It is very distressing to note that the UN Millennium Development Project (2005:21) states:

The Pacific Region is off track for nearly every goal and falling back in some areas . . . Even where there is progress, it is too slow to achieve the Goals . . . Only Sub-Saharan Africa is off track on more indicators than Oceania.

Some case studies from Fiji

Education

Colonial governments tended to concentrate on training only certain specific groups for the needs of administering the colonies: the tendency was to reserve more general education for the elites. Only slowly did the opportunities for universal primary and secondary education emerge. In most of the PICs primary and secondary education was mostly left to the churches and community organisations, and governments provided only a few schools. In Fiji, for example, non-government organisations and religious organisations operate some 886 schools (723 primary and 163 secondary) while government operates only 14 (2 primary and 12 secondary).

While Fiji has high literacy rates and has achieved almost universal primary education for both boys and girls, the quality of education and the retention rates remain problems, especially in rural areas and in outer islands. The Ministry of Education Report (2004–2006) showed that only 48.7% of the total primary school roll makes it to secondary school. What happens to the rest?

Education in Fiji is loosely said to be free. In fact this means tuition free. But 'free education' has many 'hidden costs'—uniforms, books, meals, building fees, sports fees and so on. Government's recent decision to provide free bus fares for students has had a great impact and means that attendance at school has improved dramatically.

Despite the saying that education is the key to lifting children out of poverty, by and large it is more usual for poor children to attend poor schools with poor teachers and poor facilities. Consequently it is difficult for them

to be lifted out of poverty. According to a recent study by Save the Children Fiji, 66% of those who drop out of school do so because of poverty.

In the countries of Melanesia there has been a strong push to ensure that, where 'mainstream' formal education is inappropriate or unavailable, opportunities for non-formal and vocational education exist alongside the formal education system. This has borne some fruit but has still a long way to go (Rodney V Cole discusses the topic of non-formal education in the countries of Melanesia in the booklet *Opportunities for Non-Formal Education in Melanesia*, 1996).

Housing

As long ago as 1955 the government in Fiji was made aware that there was a lack of sufficient affordable low-cost housing in urban areas—specifically in Suva and Lautoka. Government established the Housing Authority (1958) and the Public Rental Board (PRB) (1989) to meet the housing needs of a growing urban population of mainly low income earners. However, under the policy advice of the World Bank, in 1997 both the Housing Authority and the Public Rental Board had no choice but to transform themselves into commercialised state enterprises, so that the all costs of providing housing or housing lots were to be recovered. The World Bank required those in Public Rental Board housing to pay 'economic rents', which meant that rents rose from \$12 or \$15 a month to between \$50 and \$60. Those who could not pay were to be 'flushed out'. Only a small percentage of those on Family Assistance in Public Rental Board housing were to be assisted with subsidies.

Housing having thus become unaffordable for many, because of their low level of income and the high cost of public housing, many turned to squatting. The recent Housing Income and Expenditure Survey showed that 50% of workers earn incomes below \$10,000 a year and 71% of workers earn incomes below \$15,000 a year. Many earn incomes as low as \$3,600 a year.

Currently, it is estimated that at least 80% of new housing stock is built in informal settlements or squatter settlements independently of official planning authorities (Storey 2006:15–16). Thus, as the *Fiji Poverty Report* of 1997 noted, the increase in squatter settlements was more a reflection of institutional failure than the result of failures of individual heads-of-household: 'The expansion of informal housing throughout Fiji and particularly in the towns demonstrates the unmet need for affordable housing and past deficiencies in low-income housing programmes'.

Plans are afoot for new housing projects using loans from China but it remains to be seen how affordable they will be. Currently, Government provides only \$4m for housing—\$1m for HART, \$1m for PRB subsidies and \$2m to relocate evicted squatters and to assist housing projects for the poor. All in all that is not a very large commitment—particularly when government acknowledges that housing is a basic human right.

Youth

Most PICs have youthful populations. Around 50% of the population is below 26 years of age. A problematic addition to this is the high drop-out rates of school students. Even those who make it through secondary school find that there is no employment for them. In Fiji, out of 15,000 school leavers there is employment for only 4,000. What happens to the rest?

Throughout Papua New Guinea for many years there has been a serious problem of raskol (rascal) gangs that commit big or small crimes and tend to intimidate the population by creating an atmosphere that flouts law and order.

During the troubled years in Solomon Islands the youths who roamed the streets of Honiara were described as 'dry tinder' waiting to be set alight by any fiery cause. They were aimless, semi-educated and unemployed and they were looking for something to do.

In Fiji a surprising number of youths are committed to prison. Prison statistics consistently show that those committed to prison are:

- predominantly male (97%)
- mostly under the age of 25 (60%–70%)
- mostly Fijian (70%–80%).
- largely of low educational attainment and either unemployed or on low pay.

Over half the crimes are committed in the company of another person and under the influence of alcohol.

Obviously many youths in our PICs also feel excluded and forgotten.

Conclusion

Colonial governments brought limited development to their colonies. Then, as Mike Davis has pointed out, following the end of the colonial period, many post-independence governments tended to ‘abdicate responsibility for the poor in order to rule in the interests of the local elites’. This left a legacy of growing poverty and inequality. Then, when the World Bank, the IMF and other IFIs promoted the Washington Consensus with Structural Adjustment Programs, the elites strengthened their hold on wealth and power while inequality grew and the numbers living below the poverty line increased. Large percentages of the population found themselves excluded from the promises of development. I think we in the Pacific can relate to this broad analysis.

We have seen from the example of Fiji that, following the policy advice of the World Bank, the Housing Authority and Public Rental Board were commercialised and this made housing unaffordable for a large proportion of the population, who were earning extremely low wages. This fuelled the rapid growth of informal and squatter settlements.

Twenty years ago Professor Epeli Hau‘ofa (1987:10–11) warned:

[O]ne very important development that we have to watch carefully is the emergence of privileged classes in the islands for it is certain that the fates of the island communities are being decided by the ways in which these groups act, first, in relation to their own underprivileged people and, second, in relation to their important connections with each other and with similar groups elsewhere . . . It is the privileged who decide on the needs of their communities and the directions of development and whose rising aspirations and affluence entail the worsening conditions of the poor.

Even before that Susan George wrote (1976:17):

The West has tried to apply its own conceptions of development to the Third World, working through local elites and pretending that the benefits showered on these elites would trickle down to the less fortunate. . . . These methods have not produced a single independent and viable economy in the entire Third World—and in fact were not meant to. ‘Development’ has been the password for imposing a new dependency, for enriching the already rich world and for shaping other societies to meet its commercial and political needs.

Finally, I would like to quote a statement from the Meltzer Commission of the US Congress (2000). They reached a shattering conclusion about the effectiveness of the policies of the International Financial Institutions:

Neither the World Bank nor the regional banks are pursuing the set of activities that could best help the world move toward a world without poverty or even the lesser, but more achievable goal of raising living standards and the quality of life, particularly for the people in the poorest nations in the world.

The point I wish to make is that the policies we follow—particularly our economic policies—have very serious consequences for the development of our nations and have left us with many of the problems we are trying to grapple with today. They benefit the elites but exclude huge proportions of the population. As Dr Wasim Zaman stated in his keynote address on the first day of this symposium, extreme capitalist policies have often led to growth with injustice and inequality. The benefits of growth usually did not ‘trickle down’ to the poorer section of society and were not properly redistributed. Policies were not pro-poor or people-centred. Many have felt excluded and see that development is not for them but for the elites. The slogan of the ADB famously says: ‘Poverty Alleviation through Private Sector Development’. Yet far more accent is placed on private sector development by instigating policies that will boost business and overseas investment than is placed on poverty alleviation. We rarely see how private sector development will translate into poverty alleviation.

So it is about time we seriously question the policy advice we receive from the World Bank, the IMF and the ADB, and ask them to look again and come up with policies that are pro-poor, pro-rural and people centred, not just policies that somewhere down the line may have a trickle-down effect to benefit the poor.

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Discussion

- Have we got any data on the proportion of population increase due to foreign migrants coming in and issues associated with resource exploitation and impact of inward migration?

We don't have data but we do know it is a significant problem, for instance for HIV/AIDS issues.

- Concerning development of identities in urban centres, there is a sense that there are other identities developing in urban and peri urban areas. Whole cultures of resilience are developing that are talked about and are outside normal management systems. Not much has been written about it but there are patterns developing, local shopping and pricing related to the culture of urban life.

People in squatter settlements are all seeking land security, they all have pretty much the same problems and identify common problems, so perhaps that is one example.

Concerning Papua New Guinea, there needs to be research and analysis to help people to come out of denial and admit there are landless people. There is an increasing percentage of landless people who are urban, who end up on the peripheries and who are landless by the third generation. There are policy frameworks and land reform that are being introduced and their implementation will be extremely complex. We are still following western planning models but we have to change and have planned communities that help sustain people. We need proper policies and analysis of urban landowners.

We have indigenous people being overrun by other indigenous groups. In some ways urbanisation is a bigger threat than colonisation to indigenous people.

- What role can local government play in situations of climate change, for instance flooding in parts of Fiji?

A lot of peripheral urban centres are regarded as rural, and boundaries are not constant. Local government has a crucial role to play but it depends on its power, its resources and finances. How powerful are they in their ability to link with landowners and up to national governments. In Papua New Guinea there are plans to strengthen the capacity of communities but these things need support. We also need to examine the identities of communities, how they are changing. People form new identities, for instance using football teams, or maybe churches, which is interesting and may be encouraging.

- People also move around in other areas, between rural areas and over boundaries, not just to urban areas. We actually don't know what boundaries they cross, there is a lot which was unsaid in this session that needs a lot more work, there are bigger issues.

The region hasn't really taken urbanisation seriously. How do we persuade governments to do that, to address the issues? When policy is made, how do we engage all stakeholders, particularly traditional landowners.

Plenary 10

Climate change and population displacement

John Campbell

Keynote address

Climate change and population displacement

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Population and climate change

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Climate change and population displacement

John Campbell

There has been considerable interest in the so-called vulnerability of Pacific Island Countries and Territories (PICTs) to the effects of climate change and variability. In particular, low-lying communities, and especially those in countries composed entirely of atolls, are being singled out as likely to be among the world's first climate migrants. While it is true that the four PICTs consisting entirely of atolls (Kiribati, Marshall Islands, Tokelau and Tuvalu) have virtually no land to which communities whose lands have been rendered uninhabitable might go, the issue of simply relocating communities onto land that is not their own is particularly fraught in PICTs. This paper examines these issues and considers where populations displaced by the effects of climate change are likely to come from and where they may go. It also seeks to provide very rough scenarios of the likely numbers of climate migrants, although there are major data limitations to this exercise.

Climate change

Climate change refers to the effects of increasing atmospheric concentrations of trace gases, often referred to as greenhouse gases. These gases, including carbon dioxide, methane and nitrous oxide, exist naturally in the lower atmosphere and serve to reduce the loss of infrared heat from the earth's surface. Without these gases in the atmosphere the earth would be considerably colder. However, since the industrial revolution, and particularly since the mid-twentieth century, the concentrations of these gases have been increasing as a result of increasing fossil fuel use in energy production, transport and industry, increasing spread and intensity of agriculture and deforestation. In addition, the introduction of some manufactured gases such as halocarbons has added to the effect.

Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC), an international body of climate scientists, has completed four substantive reviews of state-of-the-art climate science since 1990, concluding in its most recent report (AR4) that warming of the global climate system was unequivocal, and this was very likely (90 per cent probability) to be caused by anthropogenic greenhouse gas emissions (Pachauri & Reisinger 2007:39). Moreover, the IPCC indicates that under existing regimes to limit emissions of greenhouse gases, warming will continue for some decades ahead (Pachauri & Reisinger 2007:44). Using a range of scenarios of future greenhouse gas emissions the IPCC projects that global temperatures by 2100 will be between 1.8 and 4.0 °C higher than the mean global temperature between 1980 and 1999. Increasing global temperatures will also affect sea level through thermal expansion of waters near the surface and as a result of melting ice on land. The scenarios for sea-level rise are between 0.18 and 0.59 m by the end of the century (Pachauri & Reisinger 2007:45).

It is anticipated that changing temperatures will also affect other aspects of climate including increased frequency of occurrence of extreme events such as heat waves, heavy rainfall (and flood) events and droughts. The IPCC also indicates that tropical cyclones are likely (more than 66 per cent probability) to become more intense (higher wind speeds and heavier rains) but has less confidence that there may be changes in frequency (Pachauri & Reisinger 2007:53).

Climate change and Oceania

What are the implications of these changes for the countries and territories of the Pacific Islands region? From the outset of international discussions regarding the effects of climate change, the United Nations Framework Convention on Climate Change and the Kyoto Protocol have identified small island states as being among those countries that are particularly vulnerable. While PICTs have thus been singled out as being amongst the most vulnerable places in the world, remarkably little primary research has been conducted into just what the effects of climate change will be and how communities might cope with them. Both the third and fourth reports of the Intergovernmental Panel on Climate Change recognised this paucity. It is important to identify those climate change effects that are likely to have an impact in Oceania.

Most attention has been given to the role that will be played by sea-level rise. In AR4 the IPCC stated that small island communities will be 'especially vulnerable (very high confidence)' to annual flooding of coastal areas (Pachauri & Reisinger 2007:48). Sea-level rise is likely to cause coastal erosion, enhance the effects of high tides, especially king tides, result in temporary (for example during storm surges or high wave events) inundation

of low-lying areas, and reduce the quantity and quality of fresh groundwater, especially on atolls. In extreme scenarios some atolls and low-lying coastal areas on high islands may become permanently inundated. But while sea-level rise is the problem most widely referred to, especially as a catalyst for population displacement, there are other severe effects that may also reduce the habitability of some areas.

Increased incidence of droughts, perhaps interrupted by heavy rainfall events, may place considerable pressure on supplies of potable water and have an impact upon agricultural productivity. In some areas both subsistence and cash cropping may become increasingly marginal. Water supply (for drinking and agriculture) on atolls is particularly precarious with heavy dependence on a fresh groundwater lens (also known as the Ghyben-Herzberg lens) which can contract under drought conditions and be further degraded by mixing with sea water. It may well be climate change-induced degradation of water availability that causes the greatest impacts on atolls, with drinking water and agriculture likely to be adversely affected. If tropical cyclones were to become more intense, losses from such events would increase and recovery periods may become longer. Atoll and coastal locations are likely to be exposed to greater levels of storm surge as sea levels rise. River flooding is likely to be of greater magnitudes (Hay et al. 2003; World Bank 2000).

Responding to climate change

There are two categories of response to climate change. These are referred to in the literature and policy negotiations as mitigation and adaptation. The first of them, mitigation, refers to those activities that slow down or reverse the increasing concentrations of greenhouse gases in the atmosphere. Pacific Island countries contribute very little in the way of greenhouse gas emissions and in per capita terms, most of them are among the lowest polluters (although deforestation does play a role by reducing sinks—trees, where carbon is stored). Adaptation refers to those activities that help reduce the effects of climate change on individuals, communities and countries. Adaptations may be proactive (often referred to as anticipatory) or reactive, the latter being actions that are devised and implemented after the negative effects have occurred. Proactive adaptations are likely to be the least disruptive as they may reduce the negative effects of global warming on communities or enable communities to be prepared in advance for steps they may have to take some time in the future.

Many adaptations should enable communities to remain in their place. These may include such actions as improving the sustainability of their livelihoods, building resilience to natural extremes, modifying agricultural practices and the like. But there are likely to be circumstances where, or when, such adaptations are unable to provide the protection that communities will require to maintain a safe and sustainable existence. In such cases, some form of relocation is likely to be necessary. This need not be extreme. For example, some communities may be able to move a few hundred metres inland or a few metres up slope, stay within their customary lands, and avoid the negative effects of sea-level rise or river flooding. Indeed, avoiding hazardous locations is a key element of planning for natural disaster risk reduction (Perry & Lindell 1997). However, for some communities where the effects are so severe, unrelenting through time, or occurring with such frequency that they have little time for recovery, there may not be such convenient options. For these communities, environmentally forced, or perhaps more euphemistically, environmentally induced, dislocation may be the only option.

Migration and relocation: adaptation options or adaptation failure?

At a global level the numbers of people who may become displaced by climate change is likely to be in the range of tens of millions. Myers (2002) has estimated that as early as 2010 there will be 50 million such migrants and this will rise to 200 million ‘when global warming takes hold’, presumably around mid-century. Using the various scenarios developed by the IPCC (based on different assumptions about greenhouse gas emissions) Brown (2008) projects an increase in migration of between 5 and 10 per cent along existing routes under the most favourable scenarios but suggests that under the worst cases where greenhouse gas emissions increase unabated Myers’s estimates may be well exceeded. The IPCC in its latest assessment does not project climate migration numbers but does observe that the global coastal population could grow from 1.2 billion people (in 1990) to between 1.8 and 5.2 billion people by the 2080s, depending on assumptions about migration (Nicholls et al. 2007:323).

Terminology

Before proceeding, it is useful to clarify the meanings of terms that are frequently used in relation to climate change. Environmentally forced migration refers to movement of people from areas where continued habitation is

no longer viable. In the case of climate change this is where adaptation measures, at the location, are inadequate. The terms evacuation (usually short-term movement often in response to a disaster event, which is followed by a return) and displacement (often implying a more permanent dislocation) are forms of environmentally forced mobility. The latter, in particular, tells us little about the long-term destinations of environmentally forced migrants and it is often implied that such persons move as individuals or households and displaced communities become fragmented. In this paper the term environmental refugee is avoided as, in terms of international law, the very specific definition of a refugee excludes the environment as a factor. Moreover, being labelled as a refugee may have adverse consequences for environmentally forced migrants, given the global antipathy towards the resettlement of political refugees, as is briefly discussed later.

An important concept to be considered in terms of adaptation to climate change is community relocation, which may be defined as 'a process by which a number of . . . people from one locale come to live together in a different locale' (after Lieber 1977:343). The key element here is that community integrity is maintained even though the community has been displaced. This is different from migration, which more commonly involves individual and household movement rather than larger groups, and often results in members of a community residing in a variety of destinations.

I use the term community relocation with a specific intention in mind. In the most extreme cases, particularly atolls, it is possible that communities will have to abandon their homeland, with little likelihood that they will be able to return. In these cases, if the community disperses, it is likely that the social networks that sustain it, the cultural values that identify it and the people–environment relationships that have emerged will fall apart relatively quickly. Nearly all Pacific Islands communities that have large numbers of emigrants sustain a home population. This notion of keeping the home fires burning is important in the context of communities that are very mobile. To use the terminology of Bonnemaïson (1985) and Jolly (2001), these roots enable many Pacific people to embark on journeys along routes. There is always somewhere to return to. But we have few examples, if any, of what happens when the roots no longer have land on which to remain anchored.

As implied earlier, relocation to nearby customary lands is a useful adaptation and indeed there are numerous examples throughout the region of where communities have done exactly that. Often following tropical cyclones, villages choose to rebuild inland from sites devastated by storm surge, or upwards from sites destroyed by river flood waters. Similarly, where communities can retain their home site with the support of migrants who send remittances that offset reduced local environmental productivity, it may be considered that migration is a constructive adaptive response (Barnett & Webber 2009) and there is likely to be a need for metropolitan countries to improve migration access, especially in the cases of countries like Papua New Guinea, Solomon Islands, Vanuatu, Kiribati and Tuvalu, which have very limited rights of entry into destination countries such as Australia and New Zealand. However, where all members of communities are forced to leave their land, especially to move to distant places, it may be considered that adaptation has failed and the response is a last resort unlikely to be favoured by the community members themselves.

Where from and how many?

Four main possible sources of climatically displaced people in the Pacific region are identified in this paper. First, and most commonly referred to, are atoll populations. The second group, coastal communities, are also widely understood as vulnerable given their exposure to the effects of sea-level rise. The third group, riverine communities, is often given less consideration in most climate change discussions for the region, but they are also likely to be exposed to greater risk of flood losses: on high islands, very large numbers of communities are located close to fresh water streams and rivers, and on the larger (plate boundary) islands there are many highly populated deltas. Finally, climate change may result in more droughts, more severe droughts and droughts of longer duration. Most areas of the region are relatively drought prone, usually depending on the state of the El Niño Southern Oscillation.

Atoll populations

As noted above, under some extreme scenarios many atolls will become uninhabitable as a result of climate change. Table 1 shows the 2009 atoll populations by country or territory. The four atoll PICTs currently have a combined population total of 165,314 persons. But, as the table shows, seven other PICTs that include atolls also have high islands. Thus, presently there are approximately 220,000 atoll dwellers in the region. Federated States of Micronesia, Cook Islands and French Polynesia have relatively significant atoll populations ranging

Table 1 Atoll populations in Pacific Island countries and territories

Country	Atoll populations
Atoll Only Countries	
Kiribati	98,667
Marshall Islands	54,065
Tokelau	1,167
Tuvalu	11,093
Atolls in High Island Countries	
American Samoa	42
Cook Islands	1,049
Federated States of Micronesia	20,306
French Polynesia	18,880
Palau	238
PNG	9,150
Solomon I	5,114
Total	219,771

Sources: SPC (2009), National Censuses, various reports

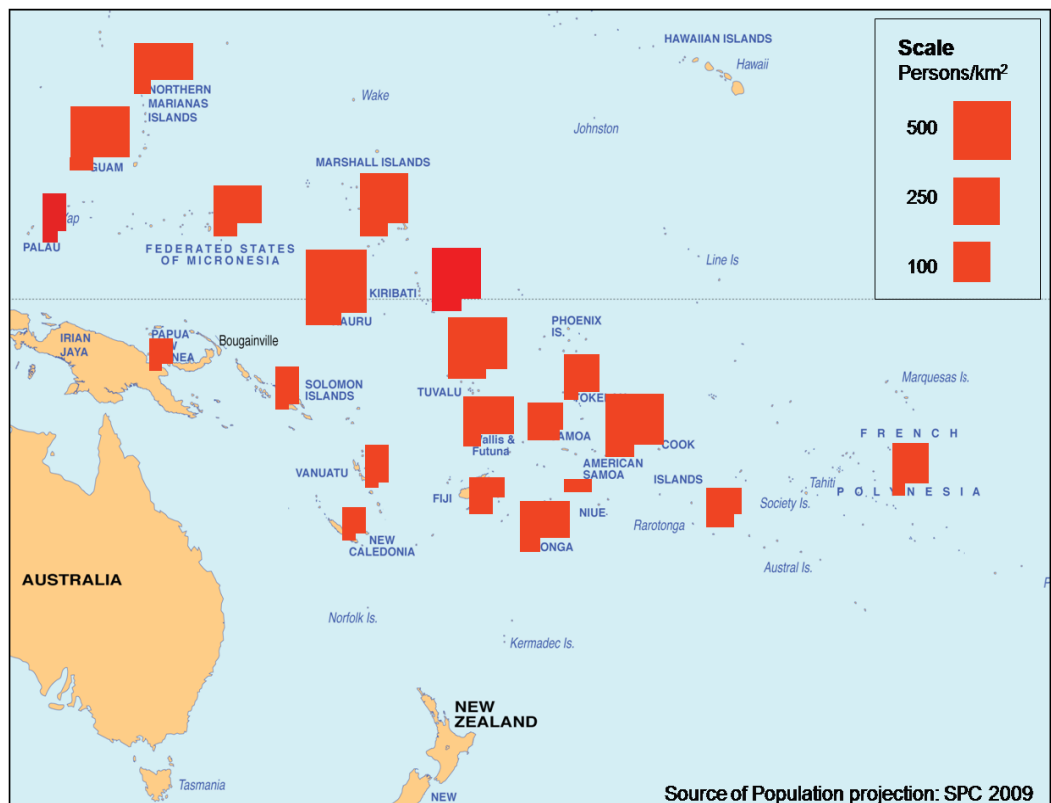
result that very high densities are found in just a few atoll locations such as South Tarawa (Kiribati), Majuro and Ebeye (Marshall Islands) and to a lesser extent Funafuti (Tuvalu). It is perhaps at these sites that the greatest stresses from climate change are likely to be experienced (World Bank 2000). The high level of exposure to climate change, coupled with high levels of population pressure on a narrow resource base adds to the high levels of risk faced by atoll communities.

Moreover, if the atolls do indeed lose significant amounts of land, the denominator for measuring crude population density will change and the densities will become even higher.

from 6.7 to 18 per cent of the total national populations. In the remaining four countries with inhabited atolls (Papua New Guinea, Solomon Islands, Palau and American Samoa) the atoll populations account for a very small proportion of the national population (ranging from 1.2 to 0.1 per cent). These atolls have a combined population of around 55,000. The majority of atoll dwellers are located in Micronesia and of the remainder all—but only a very small number of Melanesians—are Polynesian, including outliers in Melanesia and Micronesia.

SPC (2009) projections indicate that the populations of the four atoll nations may increase to about 240,000 by 2050. However, higher growth rates for the region as a whole (especially in Melanesia) see the share of atoll population falling to 1.3 per cent. Of these four atoll entities, the greatest growth is projected for Kiribati, whose population is projected to grow by roughly 45 per cent from 98,989 to more than 163,000. If atoll populations in high island countries were to grow at the same rate as the rest of the population of their country (admittedly, a problematic assumption) the combined atoll population of the region may by mid-century, using SPC (2009) national population projections, exceed 320,000.

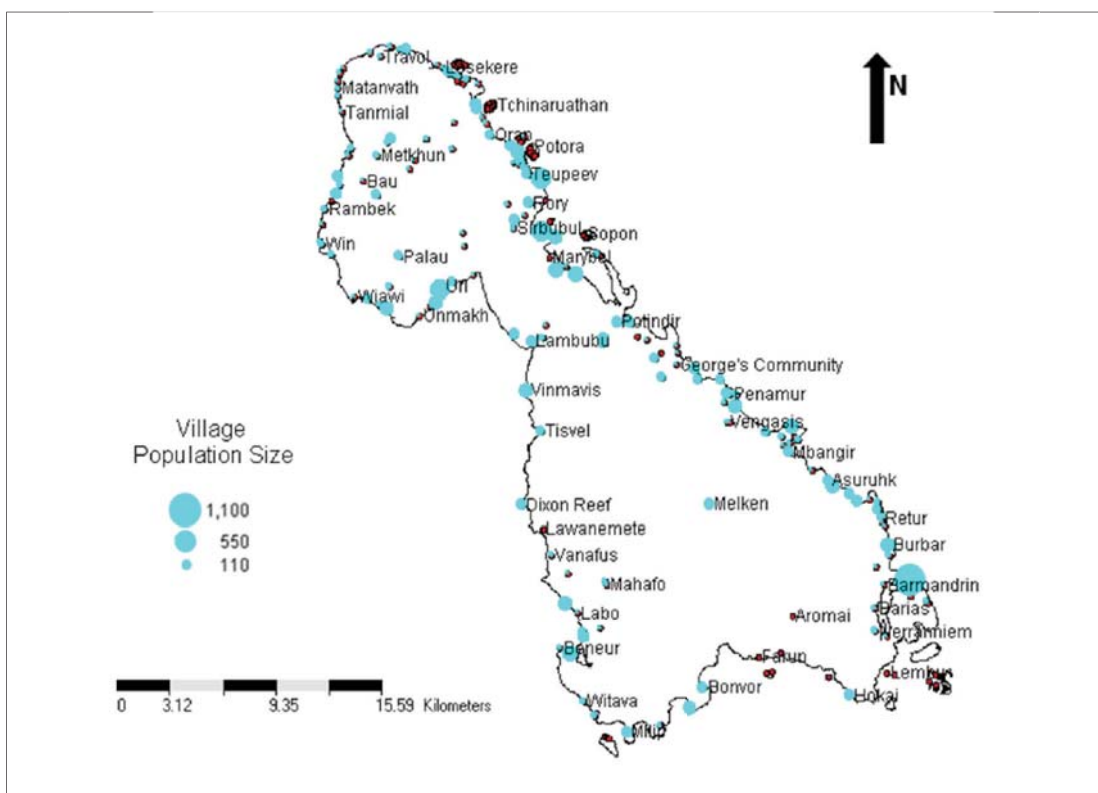
While atoll populations currently account for only 2.3 per cent of the regional total, it is important to recognise that they tend to have among the highest crude population densities. This is illustrated in Figure 1. At the same time, atolls provide the narrowest resource bases to support their populations. Moreover, the atoll countries all have high rates of urbanisation with the

**Figure 1** Projected Crude Population Densities of Pacific Island Countries and Territories, 2050.

Coastal communities

In many parts of the region, especially those that are smaller high islands (compared with the mainland of Papua New Guinea for example) the majority of communities are located on or near the coast. For many this is a historical trend fostered by missionaries and colonial governments to provide them with ease of access to, and control over, these communities. It is difficult, however, to determine, at the macro-level of a regional survey, just what proportions of coastal populations are at elevations and/or distance from the coast that are likely to expose them to increased harm from sea-level rise, inundation, erosion and the effects of storm surge. Nevertheless, there is likely to be a considerable coastal population in the region that will be exposed to increased risk as a result of global warming. Malakula, the second largest island in Vanuatu (see Figure 2) the majority of whose population lives on the coast or on small offshore islets, some of which are quite low-lying, is an example of the relatively strong tendency towards coastal population settlement. Moreover, the islands offshore from Malakula have very high population densities.

Figure 2 Map of Malakula, Vanuatu, showing the distribution of settlements. The crude population density of Malakula is very low, but many of the small islands off the coast, have very high densities.



Source: Vanuatu Statistics Office, population Census, 1999

It is difficult to estimate the numbers of people who may be displaced by the effects of climate change on coastal communities. Papua New Guinea, in particular has its largest populations located in the Highlands region. Nevertheless there are many coastal communities and some are currently being affected by coastal processes such as unusually high (or 'king' tides), the Murik Lakes area being a case in point (Lipset 2008). Given Papua New Guinea's very large share of the region's population, even a small percentage of the population being at coastal risk could convert into a very large number by regional norms. For the purposes of estimating the coastal population that may be displaced, crude scenarios have been developed. These include one, five and ten per cent of national populations, with Papua New Guinea restricted to one per cent. While somewhat arbitrary, until greater detail on population distribution and settlement elevation, and local coastal dynamics is available, these scenarios serve to give some indication of the numbers that are likely to be affected. As Table 2 shows, based on current populations, the most conservative estimate is slightly fewer than 100,000 people, but by 2050 the numbers may grow to 178,618. The least conservative scenario would see well in excess of half a million placed at risk of having to relocate.

Table 2 Broad scenarios of coastal populations of high islands that may potentially be displaced

Scenario	Potential Displaced Population	
	2009	2050
1% of total population	94,578	178,618
5% of total population, but 1% of PNG population	208,865	357,785
10% of total population, but 1% of PNG population	351,725	581,744

Source: Based on SPC (2009) data

Riverine communities

Fresh water is an essential commodity and on high islands communities typically are found close to fresh water sources such as rivers and streams, whether they are located close to the sea or inland and at higher elevations. Not only do rivers provide fresh water, flood plains are attractive sites for occupation as flood events result in the deposition of silt that forms fertile alluvial soil. Deltas are also desirable places with their diversity of aquatic and marine organisms. These communities living close to rivers and streams and in deltaic areas are also likely to be placed at increased risk from climate change. Increased incidence of intensive rainfall events and perhaps a change in frequency or magnitude of tropical cyclones may result in riverine communities becoming increasingly affected by flood events. Indeed river flooding is often a major cause of devastation in tropical cyclone events and some of the greatest death tolls have been caused by drowning in rivers. Most recently, for example, when Cyclone Guba brought very heavy rains to parts of Papua New Guinea in 2007, the official death toll was 149, houses completely destroyed numbered between 1,800 and 2,000, some 9,500 people were displaced and relief assistance was required by 58,000 people (IFRC 2008:1–2). In Fiji the greatest death toll from a tropical cyclone remains the 206 who died from drowning in a swollen Ba River in 1931 (Campbell 1985) and most lives lost in Solomon Islands as a result of Cyclone Namu in 1986 were in river floods (Blong & Radford 1993; Britton 1987). Moreover, large rivers are not the only cause for concern. Small streams can be transformed into powerful torrents by flash flooding, which is common where rivers are short and catchments relatively small. The village of Biausevu in Viti Levu is a good example, having been repeatedly levelled by flooding of its eponymous and usually placid stream, rebuilt at different locations but close to the river, before a new site was located above the level of the stream (see Box 1).

While the focus of those concerned with community displacement has tended to be on the effects of sea-level rise on low-lying communities, as these become increasingly frequent and perhaps of greater intensity, river flood events may prove to be equally important catalysts for some form of relocation. For delta communities the effects may be cumulative as river flood waters are held up by higher sea levels, an effect that may be exacerbated in the event that the rain is caused by a tropical cyclone that is also accompanied by a storm surge. Estimating the number of people likely to have greater levels of exposure to flooding is difficult as data on elevation of settlements (and their populations) at or near flood stage of rivers is not readily available. Moreover, river flooding, unless it causes severe riverbank erosion where settlements are located, may have less persistent effects than may be the case with sea-level rise. Given this, communities might rebuild at the same place only to be affected again in the future. Decisions to relocate may follow communities' experiencing the impact of an increasing frequency of events or increasingly severe and dangerous events.

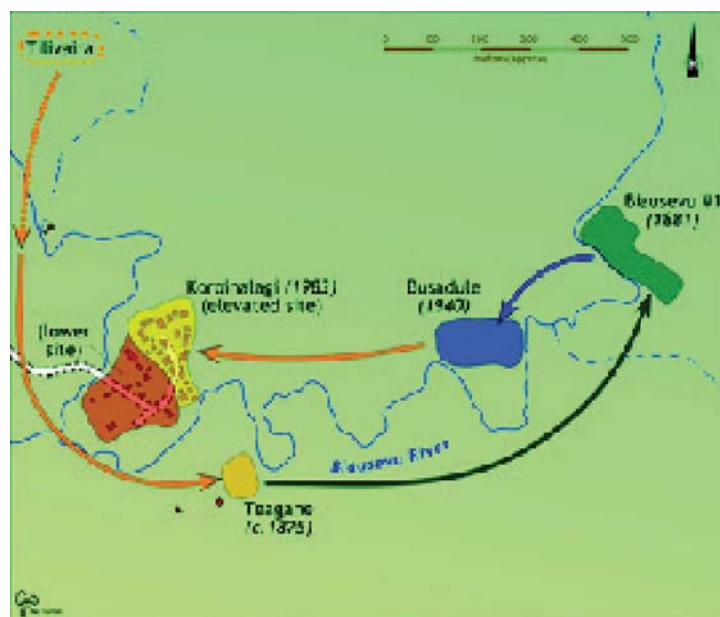
Riverine areas are relatively densely populated and the numbers likely to be affected by climate change-induced changes in flooding are likely to be quite significant, especially on larger islands. However, given that not all of those affected will be displaced, at least not permanently, it is difficult to speculate on the quantum of likely relocatees. It should, nevertheless, not be discounted as the numbers could potentially be quite high. Furthermore, flood hazards are not restricted to rural communities. Many Pacific towns and cities are exposed to floods and often squatter settlements are located in low-lying areas exposed to both river and coastal flooding. Two conservative scenarios, for river flood plain and delta populations in the high islands of the five Melanesian countries, of one and five per cent of the total high island populations of these countries, would indicate that in excess of 80,000 and 400,000 people may be placed at risk of repeated exposure to floods. Applying the same scenarios to mid-century projections shows a doubling of the numbers likely to be exposed.

Box 1 Proximate relocation within customary lands: the village of Biausevu

The Biausevu people and their forebears have relocated their village no less than four times in the past 135 years (see Figure 3). Originally the Biausevu people lived at Tilivaira, a fortified settlement on a high ridge inland from the present site. Around 1875 the community moved to Teagane, a site on lower land, closer to the coast, following the 'pacification' of the local area when missionaries encouraged communities to move from their inland settlements. This move was to land that belonged to the original inhabitants of Tilivaira and where crops were probably grown in the fertile flood plain. Following a flood in 1881 in which Teagane village was destroyed the community moved further upstream to a site known as Biausevu (No. 1). The village site still has clearly visible yavu (house mounds) and several graves are still in good repair. The community remained at this site for almost sixty years until they were again subjected to flood devastation in 1940. As a result of the damage the villagers moved to a new site known as Busadule, which was then inundated in 1972 during cyclone Bebe, one of the most destructive cyclones in Fiji's history. The village was rebuilt in the same location but plans were put in place under the leadership of the village chief to seek a less hazardous site.. He identified a small hill, named Koroinalagi, as a suitable site. He engaged a logging company which was extracting timber further inland from Biausevu to use a bulldozer to flatten the top of the hill and place the removed material on its flanks, thereby widening the surface area. The flat surface lies about 20–30 metres above the flood plain. When Cyclone Oscar caused very heavy flooding in 1983, the site was already prepared for the community to move yet again.

It took over a hundred years from the initial settlement of Teagane to the final move to Koroinalagi. Several of the relocations were unsuccessful with the community moving from one flood prone area to another. One might ask why they did not simply move uphill rather than upstream in the first place. One possible explanation is that the community needed to have access to fresh water and also needed a flat site upon which to rebuild. Cheaper PVC piping, which enabled the community to bring in water from a head some distance away, and heavy earthmoving equipment, did not become available until the latter part of the 20th Century. Today, the village is spilling onto lower land as its population grows. It is likely that, while for some of the population the relocation has finally succeeded, it is not a solution for the full community.

Figure 3 Map showing the four village sites occupied over the past 130 years in the Buiausevu area. Note the original movement was from Tilivaira, the actual location of which is beyond the borders of this map.

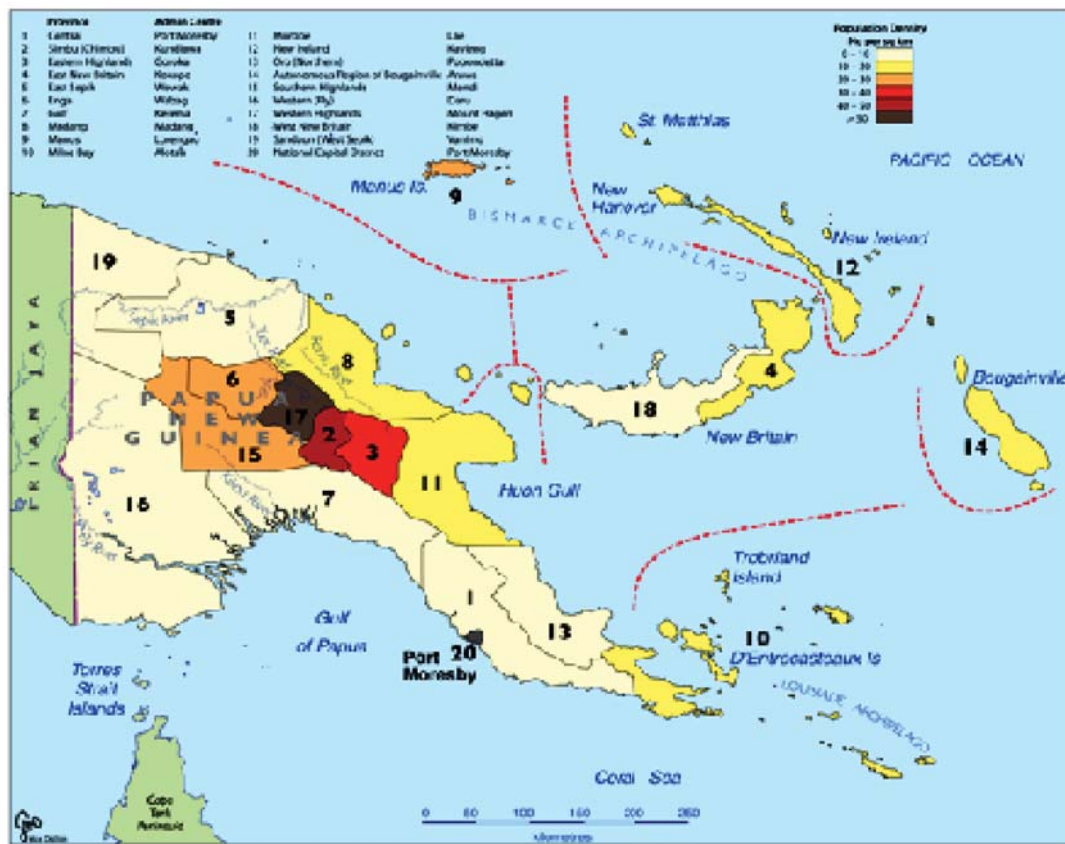


Source: Campbell 2008

Drought prone communities

Many Pacific communities are prone to drought, which the IPCC anticipates will occur with increasing frequency and duration. Typically, drought in the region is linked to phases in the El Niño Southern Oscillation and varies with location. Among the most exposed areas is the Highlands Region of Papua New Guinea (Figure 4). During El Niño events this area experiences major reductions in rainfall, in combination with heavy frosts causing catastrophic damage to the staple crop, sweet potatoes (Allen 1989; Allen et al. 1989). The five provinces that make up the Highlands had a population of 1.96 million at the last census in 2000 and accounted for 38 per cent of the national population. The population of Papua New Guinea has increased by more than 30 per cent since the census and the numbers at risk to the drought hazard are likely to be considerably greater. If the Highlands population was to grow at the national rate through to 2050, its population would exceed five million.

Figure 4 Population density in Papua New Guinea, by province, in 2000. The densely populated Highlands are also among the most prone to frosts and droughts during El Niño events.



Source: Papua New Guinea Census, 2000.

Perhaps the most significant of recent frost/drought events was in 1997–1998 (during an El Niño) where the drought extended well beyond the Highlands and 1.2 million people were considered to be suffering a ‘severe, and to some, a life threatening food shortage’ (Allen & Bourke 1997). The response to recent droughts and frosts in the Highlands has been to mobilise massive relief food programmes costing millions of dollars. If such events were to become more commonplace or more severe, the losses may be more difficult to ameliorate and the costs might escalate considerably. Eric Waddell conducted fieldwork in Enga province in the early 1970s where he noted there were numerous responses to the frost hazard. These included environmental modification (building large mounds to enable cold air to descend below the levels of the plants) and spatial responses such as having more than one garden site using different aspect and position (e.g. valley slopes (less fertile but less prone) and valley floors (more fertile but more prone)). Such gardens may be up to two days’ walk away from the village. If these options failed, a third was used, with people moving to stay with communities at lower elevations up to seven days’ walk away (Waddell 1975). According to Waddell (1983:36), the provision of relief caused host communities to show ‘an unwillingness to receive frost victims in future, responsibility being displaced towards the government and relief organisations. The codified response was being undermined and a process of

fragmentation initiated.’ It will be interesting to see what responses will emerge in the event that climate change increases the drought/frost hazard in the Highlands.

While the focus of this section has been on Papua New Guinea, drought is a major hazard throughout the region. In the case of land that is inundated there can be little doubt that displacement is environmentally forced. With drought the relationship between economic marginality and environmental marginality is blurred. Increased frequency and severity of drought events are likely to reduce agricultural productivity, affecting both subsistence and cash economies. In the case of subsistence agriculture, the effects of production falling below a certain threshold are likely to be malnutrition and other health effects, the latter of which may be worsened by reduced potable water quantities or quality. Such adverse effects on livelihoods may well play a significant role in decisions for communities and individuals to relocate. While it is difficult to surmise the likely numbers of environmentally induced migrants from drought affected areas, it is possible that the numbers could be very high.

As can be seen from the preceding sections, estimating the total number of likely climatically forced migrants is speculative. However, scenarios have played an important role in improving our understanding of climate change and its effects and informing policy on response options. Table 3 summarises the scenarios of displaced populations from atolls, coasts and riverine areas. Droughts are excluded from the total, given the difficulties in identifying places where repeated and prolonged droughts threaten sustainability despite the significant effects they may well have in many parts of the region. As the table indicates there may be between 665,000 and 1,725,000 people seeking to find new places to live as a result of climate change by the middle of the twenty-first century if atolls, coasts and rivers are adversely affected. While such numbers are clearly approximations, they do indicate that climate change may result in significant upheaval for a large number of communities in PICTs.

Table 3 Scenarios of population displacement as a result of climate change

	2009 estimates		2050 projections	
	low	high	low	high
Atolls	240,000	240,000	320,000	320,000
Coasts	95,000	350,000	180,000	580,000
Rivers	80,000	400,000	165,000	825,000
Totals	415,000	990,000	665,000	1,725,000

Where to?

Where will be the destinations of these displaced people? The options for finding new homes for populations displaced by the effects of climate change may well be limited. If we examine the current situation with political refugees the prognosis looks very bleak. In 2007 according to UNHCR there were 11.39 million refugees (30 million if internally displaced persons were included). Fourteen countries accepted refugees for resettlement but the numbers were very small: just 75,300 or 0.66 per cent (UNHCR 2008). Such reluctance to accept displaced people does not auger well for a future, warmer world.

There are four broad sets of options. First, communities may relocate within their own customary lands as was the case with Biausevu (Box 1). Such proximate moves as these are not uncommon in the region and many examples may be found. Often these moves occurred after villages were devastated by extreme events, usually as a result of storm surge or flooding associated with tropical cyclones. The second set of options might also be referred to as proximate relocation. While less commonly than the first set, but by no means rarely, communities move to nearby lands that are elevated or further from the threat of flooding or storm surge and that belong either partly or fully to other neighbouring groups. Examples include the village of Naikeleyaga in the Lau Group of eastern Fiji and Avar, a village in Mota Lava, northern Vanuatu. Such moves have often been facilitated by traditional processes of negotiation and compensation (Cagilaba 2005). They have not always been without problems, as Cagilaba shows, as new (perhaps more litigious or perhaps more populous) generations challenge past (traditional) arrangements.

While proximate relocations, especially within a community's own lands, are the least disruptive they are not without costs. One of the key issues relating to proximate relocation is the relatively prosaic problem of getting water uphill. Such problems are enduring and expensive in terms of either piping and pumping or physical labour (often gendered) in carrying water uphill. Similarly, relocation often sees communities further removed from their gardens and fishing grounds, adding extra costs in terms of time and labour.

The third option is community relocation further afield, to another island or province for example, but within the same country. There are significantly fewer examples although there are numerous urban settlements where people from a home island coalesce. In all of these cases, home populations remain and the communities at both destination and origin retain their links through the exchange of money and goods. Many of the urban communities live in squatter settlements as freehold land is in limited supply and customary landowners often do not wish to see permanent structures being established on their land. Many of these settlements are on insecure locations such as steep slopes and low-lying sites including wetlands and are exposed to considerable risk from heavy rain events causing landslides and flooding. Where people are displaced to urban areas as a result of climate change, it is likely that they will be further exposed to the kinds of danger they have been forced to leave.

Examples of within country resettlement include the community of Polynesians from Kapingamarangi on the Micronesian island of Pohnpei, and the Tikopia (Polynesian community) on Russell Island in Solomon Islands, and Sikaiana and Anuta communities in Honiara are other examples. Such relocations often establish minority communities and interethnic tensions may result. The issue of land (to be discussed later) remains, with 'host' communities loath to give up their birthright. Where communities have relocated in urban areas in Pacific Island countries other social processes emerge. Modell (2002:5) edited a special issue of *Pacific Studies* on Pacific Island migrant communities in urban settings. She captures some of the issues confronting migrants from rural areas into such settings:

In the following essays, community creation goes on in settings of complexity, heterogeneity, and diversity characteristic of the 'city.' These are settings in which class replaces kinship and distance replaces closeness as the basis for interaction, where clues to personal behaviours are puzzling and anonymity the mode of self preservation.

Modell was referring to communities of migrants, not relocatees or people who were subject to enforced displacement. Nevertheless, she provides insights into the likely problems facing communities relocated within countries but well away from their original lands.

One example of community resettlement from one island to another is the Maat community from Ambrym, who were resettled near Mele on Efate in Vanuatu in the early 1950s. Tonkinson (1977:275) examined the relocation and observed that it was rendered problematic by the colonial government authorities who organised it. Often they encouraged or enforced relocation based on their colonial perceptions of particular sets of circumstances:

The 1951 relocation [of Ambrymese after the volcanic eruptions] differed from previous ones in several important ways. First, the prolonged ash-falls that precipitated the decision to evacuate the area were viewed as a crisis by the condominium government, not by the Ambrymese, who were accustomed to such phenomena and regarded them as inconveniences. Second, the decision to relocate was made by the administration, not the Ambrymese. Third, the places selected for refuge were chosen because of their convenience for the administration, not the preferences and needs of the Ambrymese. The Ambrymese were reluctant to leave their homes, especially if this meant relocating on the allegedly sorcery-ridden island of Epi. The misgivings of the Ambrymese were confirmed when a hurricane struck Epi six weeks after the resettlement, killing forty-eight people and levelling the shelters of the refugees.

While the majority of Pacific Island people are no longer administered by colonial governments, it is important that contemporary civil servants and others involved in climate change adaptation work heed Tonkinson's observations. Local environmental knowledge must be taken into account along with local understanding of extreme events. Not all extremes, even climatic ones will be the result of climate change, and local communities still retain a number of coping mechanisms.

The fourth category of community relocation is the most extreme in that it involves moving across international boundaries. Much of the media coverage of so-called 'environmental refugees' is evocative of people forced not just from their lands but from their country. Much of this discourse implies that millions of people from developing countries will find their way to the developed countries, and sometimes has strong hints of xenophobia. None of this discourse seems to consider the possibility of entire communities relocating, let alone maintaining

their social, political, legal and cultural structures. Indeed, we have very few examples to draw from of such international relocation. There are only three cases of relocation beyond what we might call national boundaries in the Pacific region. The first of these is a Micronesian community from Banaba (now part of Kiribati), which was devastated by phosphate mining; these people now live on Rabi island in northern Fiji. The first group arrived on 15 December 1945 (Silverman 1977b). Fraenkel (2003:12) reports that the 'Banabans remain one of Fiji's most disadvantaged and politically marginalised communities. Affirmative action programs for indigenous Fijian and Rotuman communities in the aftermath of the 1987 and 2000 coups have not been targeted at Banaban peoples'. Moreover, the original inhabitants of Rabi who were displaced to the nearby island of Fiji are seeking to reclaim their island (Pacific Island Report 2007). Banabans are faced with disruption of their traditional link to the 'mud' of their home island (Silverman 1971; Teaiwa 2005) coupled with tension and uncertainty regarding their place in the nation of Fiji and security of settlement on Rabi. While a small 'caretaker' population has returned to Banaba, this relocation probably has the most potential to inform climate change-induced relocation, for while Banaba has not been inundated by rising seas, it has been seriously degraded by the phosphate mining.

The second example is a Polynesian community from Vaitupu (now part of Tuvalu) on Kioa island in northern Fiji. The island was purchased in 1946 and settlement began 26 October 1947 (Koch 1978). The final example is the Gilbertese (I-Kiribati) community in Wagani and Gizo, Western Province, Solomon Islands (Knudson 1977). This relocation, encouraged by the colonial administration of the Gilbert and Ellice Islands, which considered some of the atolls in the Gilberts group of islands to be overpopulated, initially began with relocation to islands in the Phoenix group in the central Pacific. These islands, though, lacked sufficient fresh water and people were then relocated to Solomon Islands, beginning in 1955 and continuing through to 1971. The relocatees were placed in areas where land quality was poor and in many cases they did not have security of land tenure (Fraenkel 2003). Despite these seeming disadvantages, the relocation has been a source of disgruntled tension, and 'while saying they were not hostile to the Gilbertese as such, Western [Province] leaders resented the fact that their province took all the burden of Gilbertese resettlement' (Premdas et al. 1984:45). The 'international' type relocations took place during the colonial period under the colonial governance of the United Kingdom, which initiated, implemented and/or facilitated each of the moves. Each of the three communities was relocated to quite distinct cultural milieux from their original home.

Discussion

Climate induced migration is likely to significantly impact upon Pacific island communities, placing pressure on community cohesion including the loss of a central 'home' site or locus, imposing considerable social and economic costs, breaking the strong interconnection between people and their land creating considerable practical problems in finding sites for relocation. At worst, these may be combined with loss of sovereignty. Some of these issues are discussed below.

Loss of community locus

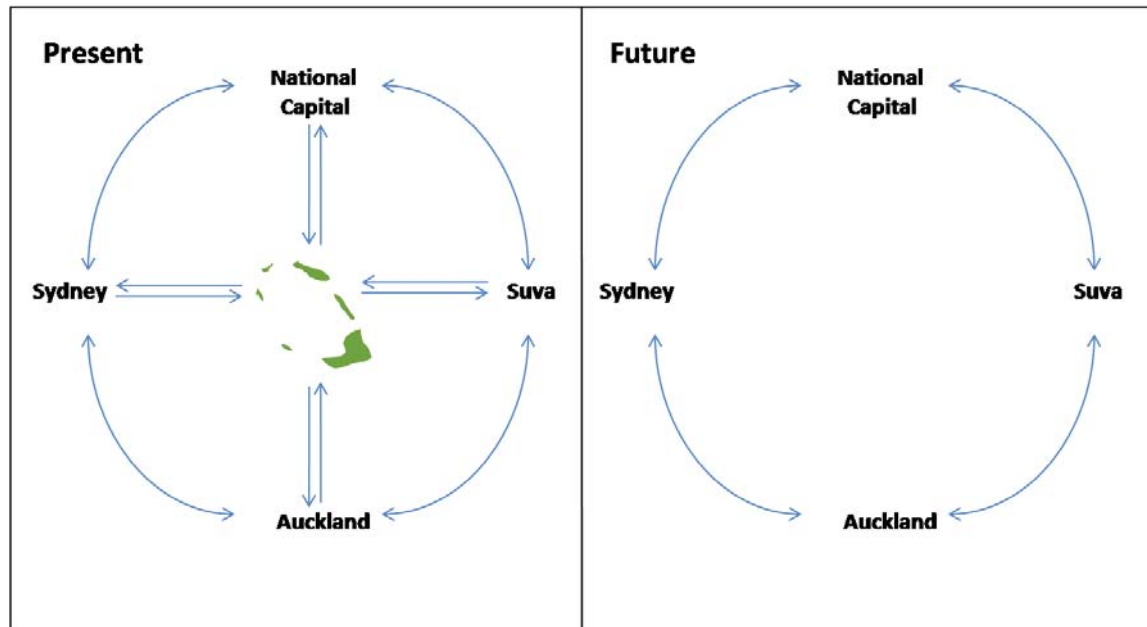
Climate induced migration is likely to have a significant impact upon Pacific island communities, placing pressure on community cohesion, including the loss of a central 'home' site or locus, imposing considerable social and economic costs, breaking the strong interconnection between people and their land, and creating considerable practical problems in finding sites for relocation. At worst, these may be combined with loss of sovereignty. Some of these issues are discussed below.

Loss of community locus

Climate induced community relocation is critical for entire communities that are forced to leave their land. The alternative for such communities is likely to be social disintegration, loss of kinship relationships and moral economy as no nexus remains as a focal point for community identity. A 'doughnut effect' may emerge (see Figure 5). This is where, typically, migrants from a Pacific Island community may reside in a number of different places such as in the (home) national capital, Auckland and Wellington in New Zealand, Sydney and California. These groups maintain linkages with the home community and among the various new locations. The flows of people and materials back and forward to the home island may be likened to spokes in a wheel. Similar flows exist among the emigrants forming the circumference of the wheel. But the whole is held together by the central community and its land. The loss of that hub can be likened to the creation of a doughnut, with a hole in the centre. We do not have historical experience of such an occurrence, but climate change may prove

to change that situation and communities are likely to embark on a social experiment in which they have little desire to be involved. However, one interpretation may be that communities will exist with no central location called home but its members may drift around the perimeter of a network without a centre .

Figure 5 A hypothetical atoll and its linkages to other places through the flows of people, goods, ideas, language and culture. The diasporas are also linked together but the home island retains a central unifying role. In the future should the home island become uninhabitable, this central component of the migration network may be lost.



Costs of relocation

If social and cultural transformation is to be avoided community relocation is likely to be the sole solution. However, it is fraught with problems especially as distance and the number of boundaries crossed increases. This is illustrated in Figure 6, which shows an exponential increase in the costs of community relocation. It is difficult to imagine a situation where a community may be able to relocate as a whole, maintain its social cohesion and lore, and exist in another country. Within the region, customary ownership of land is enshrined in many constitutions developed upon independence.

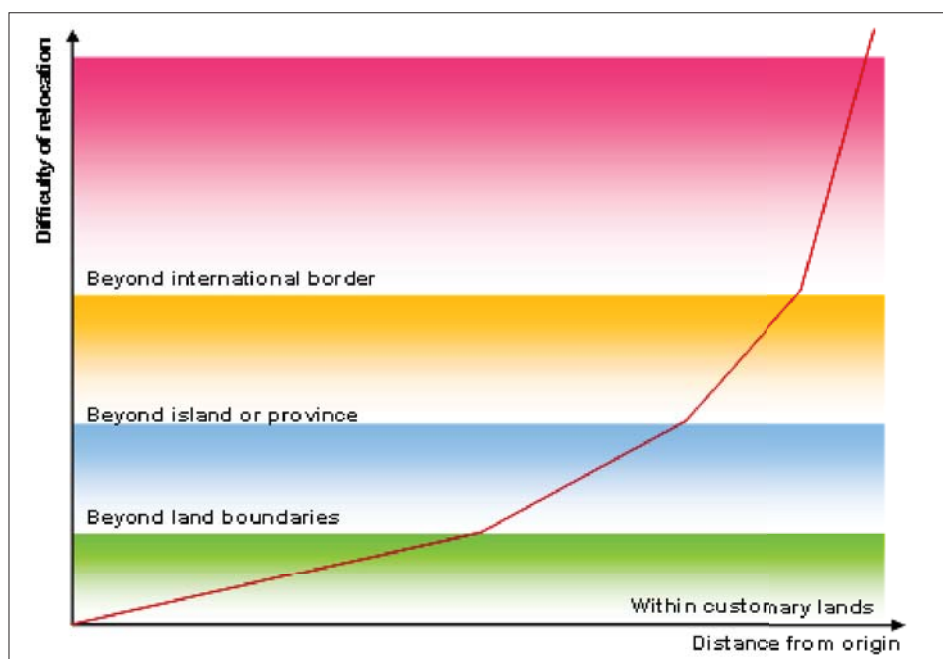


Figure 6 The costs of relocation. The social, cultural and economic costs of relocation increase with distance. They also increase when certain thresholds are exceeded such as crossing land tenure boundaries, island boundaries or national boundaries.

The importance of land

Communities that are forced to relocate (as a result of either government edict or environmental degradation) often find themselves in a state of discontent wishing to return to their homeland. Given that climate change is an external 'force' it is likely that such discontent would be an outcome for communities that are relocated as a result of climate change effects. The root of this discontent is the very strong relationship or bond that exists between most Pacific Island communities and their land—in most cases they are inseparable. This is certainly the case in Fiji, as Ravuvu (1988) notes in relation to villages located in central Viti Levu:

The people of Nakorosule wherever they are and in whatever work they are involved are often reminded by their elders not to forget the Vanua, meaning the land and the social system and the dela ni yavu, one's house site back in the village . . . The Vanua in terms of the dela ni yavu is the physical embodiment of one's identity and belonging. (Ravuvu 1988:6)

The people of Nakorosule cannot live without their physical embodiment in terms of their land, upon which survival of individuals and groups depends. It provides nourishment, shelter and protection, as well as a source of security and the material basis for identity and belonging. Land in this sense is thus an extension of the self; and conversely the people are an extension of the land. (Ravuvu 1988:7)

Similar relationships are found in Polynesia and Micronesia. Pond shows that the two are really inseparable and it is difficult to conceive of one without the other:

For example, in Cook Islands Maori, 'enua' means 'land, country, territory, afterbirth'; in Futuna 'fanua' means 'country, land, the people of a place'; in Tonga, 'fonua' means 'island, territory, estate, the people of the estate, placenta' and 'fonualoto', 'grave'. We can see that in some Polynesian languages, proto-fanua is both the people and the territory that nourishes them, as a placenta nourishes a baby. (Pond 1997:32, quoted in Batibasaqa et al. 1999:100)

In Micronesia the same relationship is found:

The land has even been viewed as possessing a sacred or spiritual quality, expressed in the mental attitudes of Marshallese when they think of the land as the very root of their worldly existence. (Mason 1987:4)

Such a relationship renders leaving land, and equally importantly giving it up to others, as highly unsatisfactory. As a form of adaptation, breaking this bond raises serious questions that are unlikely to fade easily with the passage of time, as Mason observes in relation to Kapingamarangi Atoll, a Polynesian outlier in the Federated States of Micronesia:

For the people of Kapingamarangi Atoll, no other single concern seems to be as omnipresent and anxiety-provoking as their concern over land. No other single concern generates the intensity of interest and emotion as does land. People may insult one another, but the insults will be forgiven; tempers sometimes flare and end in fist fights, but others will intervene, and the opponents will apologize and forget the incident; marriages break up, but the wounds heal. But a land dispute is never forgotten, nor do the opponents forgive each other, nor is the matter ever really settled, even when the litigants are long deceased. (Lieber, 1974: 70)

As Ravuvu implies, migrants are secure knowing that their vanua remains. Climatically forced relocatees, however, may no longer have such security. The act of relocation may be seen as a measure that can create a fissure in this set of relations. This may be particularly so for those who leave their land, but also may apply to those who may give up some of their land for relocatees. This disruption of the land–person–community bond is not so significant for emigrants who may always have the option of returning, but where land is physically lost or made uninhabitable, the disruption is much greater.

It should be noted that most Pacific island communities are not sedentary and migration and mobility have been a hallmark of many. There are some with quite long histories of repeated community relocation over great distances (e.g. Waiko 1985). Nevertheless, for many, the vital link to land is critically important.

International relocation in the post-colonial era

Lieber (1977) edited a collection on resettlement in Oceania. It covered mostly relocation that took place in the colonial era under a number of regimes. Silverman (1977a) noted that there were a number of reasons why this is significant. Colonial administrations could make decisions about land and community locations with fewer constraints than is currently possible where land is enshrined in laws that were established to protect customary

land rights in the newly independent nations. Second, colonial administrations could easily move people across what are now international boundaries, as long as the territories were colonised by the same metropolitan power. This was the case for the three existing cases of ‘international relocation’. They all took place under British Colonial Rule where the Western Pacific High Commission oversaw the Gilbert and Ellice Islands Colony as well as Solomon Islands, among others, and was headquartered in Suva, Fiji.

It is highly unlikely that it would be possible to transplant a community from one cultural and environmental setting to another in the contemporary Pacific. Where suitable land might become available (as in a freehold coconut plantation being sold) the descendants of the original inhabitants would be the most likely to have priority in most countries in the region, if indeed the land was to be returned to customary ownership. Relocation outside the region would most probably be to countries such as Australia, New Zealand and the United States, where land is held in fee simple and where the current political economy is capitalist and lifestyles are individualistic. In this sense, any form of population movement would be more likely to occur as migration with the community, characteristics of the origin being considerably transformed if not completely destroyed.

The need for information

The scale of GCM models that are used to project climate change is currently limited to one degree quadrants so that the great majority of PICTs fall under their scope. Scale issues are intensified when we seek to determine which communities are likely to be exposed to the effects climate change. Elevation data at one metre intervals may even be too coarse. Nevertheless, whether or not communities are likely to be environmentally displaced, a body of data identifying exposure to climate change at the local level is desperately needed. At best it can be used to develop community based in-situ adaptations that are proactive and likely to reduce major disruption in the future. It can also help to identify those communities where some form of relocation is likely to be necessary. The greater the lead-in time, the greater the possibility that relocation may be successful, for it is likely to require years of negotiation and conversation, between neighbouring landowners, between relocatees and landowners who are strangers and between governments, and including their respective landowners.

Conclusions

In recent years the neglect by the international community of adaptation to climate change has altered, as the realisation has finally dawned that efforts to mitigate climate change have fallen far short of what is required to stop ‘dangerous’ warming—which in effect is what the United Nations Framework Convention on Climate Change calls for. Migration is a valid adaptive response, just as it is for many communities a rational development tool. This is especially so where communities can continue to reside on their own lands and the flows of migrants and goods are focused on that location. In cases where habitation becomes impossible major sets of problems arise. The political, cultural, social, psychological, economic and environmental costs of such movements may be extremely high.

This requires three sets of actions. First, mitigation must remain an absolute priority. Pressure must be sustained on all greenhouse gas emitters, and especially the major ones, to take the issue seriously and act promptly to make really significant reductions in their emissions. Secondly, if such mitigating actions are not put in place, other proactive measures must be undertaken to facilitate adaptation to climate change. Ways must be found to minimise the costs of dislocation and displacement. As much as possible, realistic community relocation must be facilitated in ways that make it possible for relocated communities to maintain their lore and law. In cases of whole countries, their sovereignty must be protected. Thirdly, where migration is a positive adaptive response for communities in locations that are likely to be rendered uninhabitable, this should be facilitated through improving the access migrants from Pacific Island countries have into Pacific Rim and former colonial powers.

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Population and climate change

Eduard Jongstra

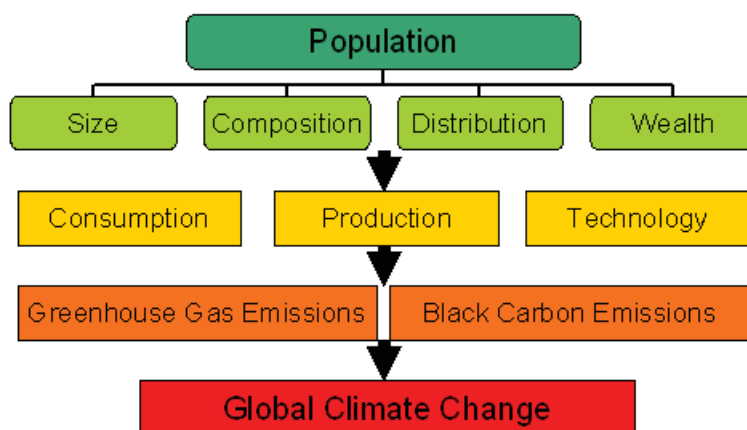
In the context of responses to climate change, both mitigation and adaptation efforts must take population dynamics into account. Mitigation essentially means finding ways to reduce climate change, while adaptation means adjusting to its actual or expected effects. Mitigation and adaptation efforts should be given equal consideration. Poor mitigation commitments and actions will impose a higher demand on adaptation measures and will require additional funding.

With small total population numbers in the global context and potentially devastating impacts resulting from global climate change looming, it is understandable that Pacific Island countries (PICs) focus primarily on adaptation issues, rather than on mitigation. However, delegates from these countries to the Copenhagen Climate Change Conference need to be aware when placing their demands on the negotiating table of the different dimensions of climate change mitigation. The current paper discusses some of the intricacies of incorporating the population dimension in mitigation, and some of the controversies associated with this.

The United Nations Conference on Climate Change, which is expected to negotiate the successor agreement to the Kyoto Protocol, will be held in Copenhagen from 7 to 19 December 2009. The conference will consist of a high-level segment in parallel with negotiations on the outcome document of the conference. A draft text of that document is now with governments (and posted in the UNFCCC Website). The text makes only superficial reference to population dynamics. Urbanisation, for instance, is not mentioned, even though almost all future population growth will occur in cities, as documented in the 2007 State of the World Population – Unleashing the Potential of Urban Growth, and elsewhere.

The pathway through which population affects climate change is depicted in Figure 1.

Figure 1 Mitigation linkages between population factors and climate change



In this diagram, the population dimension is represented through its main demographic components, i.e. size (or growth); composition, which relates to age structure as well as household composition; and distribution, a major aspect of which is urbanisation. Strictly speaking, wealth (or affluence) is not a demographic factor. It is, however, a major component in conjunction with the other demographic ones, and is typically an important background variable that both affects and is affected by demographic processes.

The diagram indicates further that the demographic components of population change, in conjunction with wealth, affect intermediate variables of consumption, production and technology. Interactions between these three components in turn affect GHG (greenhouse gas) emissions and emissions of black carbon. The latter is mentioned separately because it is a component that is often overlooked, but has great mitigation potential, as its presence in the atmosphere is typically of short duration, unlike that of greenhouse gases (Wallack & Ramanathan 2009).

Population growth and size

The contribution of population growth and sheer population size to increases in greenhouse gas emissions is irrefutable. Statistical analyses on the net effect of population growth on GHG emissions suggest that a one per cent increase in population is generally associated with a one per cent increase in carbon emissions. See also Figure 2.

Figure 2 Correspondence between GHG emissions and population growth

Study	% increase in carbon emissions per 1% increase in population
Dietz and Rosa 1997	1.15
Shi 2003	1.43
York, Rosa and Dietz 2003	0.98
Rosa, York and Dietz 2004	1.02
Cole and Neumayer 2004	0.98

Source: Jiang & Hardee, 2009

The findings from statistical analysis of historical data have been used to inform the projections of future climate change, including those of many models incorporated into IPCC reports. In almost all climate models, population size is the only demographic variable considered.

In the year 2000 the IPCC published its Special Report on Emission Scenarios. This report was ground-breaking in its attempt to take demographic processes such as ageing and urbanisation into consideration. While this report recognised the potential importance of these factors, the IPCC's subsequent assessment reports did not reflect the messages in this respect. The following excerpts may have accounted for this.

- On ageing: 'Important uncertainties of this effect remain, not least because household formation rates of ageing populations are not well understood.' (SRES 2000, section 3.2.4.1).
- On urbanisation: 'Urbanization, though, is not a rigorously modeled phenomenon within the projections. Essentially, future urban and rural growth and decline rates are simply assumed and applied to the projected population levels.' (SRES 2000, section 3.2.4.2).

The persistence of simplistic views on the impact of population growth on GHG emissions, and by extension, on climate change, has contributed to a profusion of reports and statements that can best be summarised as 'the Northern Perspective'. Its argumentation may be summarised as follows:

1. Climate change is anthropogenic, i.e. caused by humans and their activity.
2. If there were fewer humans, there would be less climate change.
3. A reduction in population growth will help reduce greenhouse gas emissions.
4. Family planning is needed to reduce population growth and thereby abate GHG emissions.

A somewhat more refined version of this argument takes principles from the 1994 International Conference on Population and Development (ICPD) into consideration and adds the following:

5. Addressing the 'unmet need for family planning' would be a strategy that avoids coerciveness.

On the surface, the argument sounds plausible enough. But it assumes that every human being is an undifferentiated unit that produces the same amount of GHG, irrespective of age, living conditions and wealth.

Not surprisingly, this 'Northern Perspective' generated much debate (and still does). The counter-arguments have come from many different sources, but are dubbed here as 'the Southern Perspective', for lack of a better term. A summary of the 'Southern Perspective' comprises the following arguments:

1. Major increases in greenhouse gas emissions occurred in the developed world, where population growth is low.
2. The highest population growth rates are found in poorest countries with lowest per capita GHG emissions.
3. Advocating family planning to mitigate global climate change puts the burden (of guilt and responsibility for doing something about it) on the developing countries.

4. But it is in the developed countries that per capita greenhouse gas emissions are many times higher.
5. This distortion would appear even greater if GHG emissions in developing countries resulting from extraction and production processes that primarily serve the developed world were attributed to developed countries.

The more polemic contributors to this debate suggest that economic and political forces are behind the 'Northern Perspective', and that it effectively serves to avoid taking measures against unsustainable consumption by the rich (and powerful). Hence the final argument from the 'Southern Perspective' runs:

2. Focusing on population growth is easier than fighting powerful multinational companies or curbing unsustainable consumption in developed countries.

Focus on so-called 'unmet need for family planning'

Recently a remarkable report was released that aims to reconcile the controversy on family planning as a mitigation measure to reduce GHG emissions. A consortium called Optimum Population Trust (OPT) commissioned a cost-benefit analysis of the potential impact of family planning on GHG emissions. Interestingly, it does this on the basis of addressing 'unmet need for family planning' (defined as the proportion of women who want no more children or wish to delay further childbearing, but do not use a (modern) family planning method). By thus focusing on 'unintended births' the report avoids the danger of being accused of promoting coercive family planning programs. (The issue of coerciveness had been one of the hot topics during the ICPD conference in 1994, which contributed to the paradigm change towards Reproductive Health and Reproductive Rights.)

OPT's cost-benefit analysis is thorough in describing its methodology and assumptions that were made, and appears to address most arguments put forward by the 'Southern Perspective'. Most notable are the following. Meeting all unmet need:

1. reduces unintended births by 72%. This value is obtained from UNFPA and is based on empirical findings
2. accounts for country-specific levels of per capita CO₂ emissions. To some extent this addresses the argument that poor countries produce much less GHG on a per capita basis than rich countries do
3. accounts for country-specific levels of unmet need. Average annual numbers of unintended births for each country were calculated on the basis of data from the Global Health Council
4. uses UN Population Projections. The projected population according to the medium variant of the UN projections and its intrinsic population growth rates were used as the basis for further calculations
5. uses an average cost for Family Planning of \$22.70 per couple per year. This value is an average that is reported by UNFPA. The model assumes that the cost of basic family planning is and remains the same across all countries in the world over the model's period.

The OPT model covers the period 2010–2050 and compares the outcomes, in terms of tonnes of CO₂-equivalent emissions, from the UN projected populations, with those that would result from application of the model with family planning. The results suggest that even if not all assumptions would be met, the proposed mitigation approach is not one that may be ignored. The main findings of the OPT cost-benefit analysis are summarised as follows:

1. The world population would be reduced by 0.5 billion people by 2050.
2. The entire cost of meeting all unmet need would be \$220 billion over 2010–2050.
3. It would result in abatement of 34 Giga-tonnes CO₂ over this period.
4. The mitigation potential of basic family planning is \$6.46 per abated tonne CO₂.
5. This is five times less expensive than all other low-carbon technologies combined.

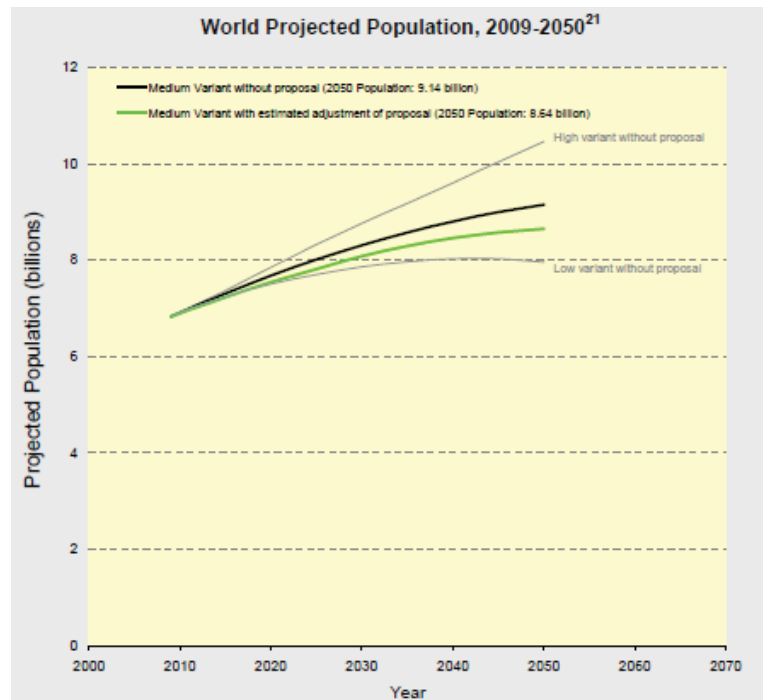
Figure 3 shows the overall impact of the OPT proposal in terms of population numbers.

Figure 4 shows a comparison of the cost effectiveness of the OPT proposal with that of selected alternative methods and technologies. The values for the latter are taken from McKinsey Global Greenhouse Gas Abatement cost curve v2.0 as reported in Project Catalyst 2009. The comparison applies to the years 2020 and 2030, which are the points in time for which data are available. While some of the data show extreme fluctuations, the relative position of the OPT proposal remains favourable.

Out of the total 34 Gigatonnes of CO₂ equivalent (GtCO₂e) that would be abated by implementing the OPT proposal, 5 GtCO₂e comes from preventing unintended births in the USA. This finding indicates that the focus on unintended births rather than on a measure such as the Total Fertility Rate means that the burden of this mitigation is not exclusively placed on developing countries. China would have the second highest abatement,

at 4 GtCO₂e, the Russian Federation would come third, with 3 GtCO₂e, and India would take fourth place, with 2 GtCO₂e abated over the period 2010–2050.

Figure 3 World projected population with OPT proposal



Source: Wire, 2009

Figure 4 Cost-effectiveness of OPT Family Planning proposal

	\$ / tCO ₂ e	
	2020	2030
Geo-thermal	-9	-11
Sugar Cane	6	-5
Family Planning Proposal ²⁸	7	7
Reduced Deforestation ²⁹	13	-
Switch-Grass	18	8
Wind	24	26
Solar	51	24
Coal CCS New Built	57	56
Coal CCS Retrofit	83	69
Plug-in Hybrids	92	-8
Electric Vehicles	131	62
Total Low Carbon Technologies	32	30

Source: Wire, 2009

To conclude this discussion on mitigation based on population growth, some additional considerations that could affect the impact of the OPT proposal are given below.

Considerations that would strengthen the proposal

- Several developing countries are rapidly industrialising and increasing GHG emissions (for instance India and China).
- UNFPA projects that Unmet Need will grow by 40% over the next 15 years as millions of young people—the ‘youth bulge’—become sexually active.
- Reducing unmet need for family planning has additional points in its favour in that it is beneficial for reproductive health and it reduces the social costs.

Considerations that would weaken the proposal

- The study uses national-level average per capita GHG emissions. It does not differentiate rich from poor inside a country.
- Urbanisation trends could affect levels of unmet need.
- Its effects on climate change will be long-term, first because there is a population momentum (i.e. the lingering effects of past fertility) and secondly, because meeting unmet need requires behaviour change.

Population composition and distribution

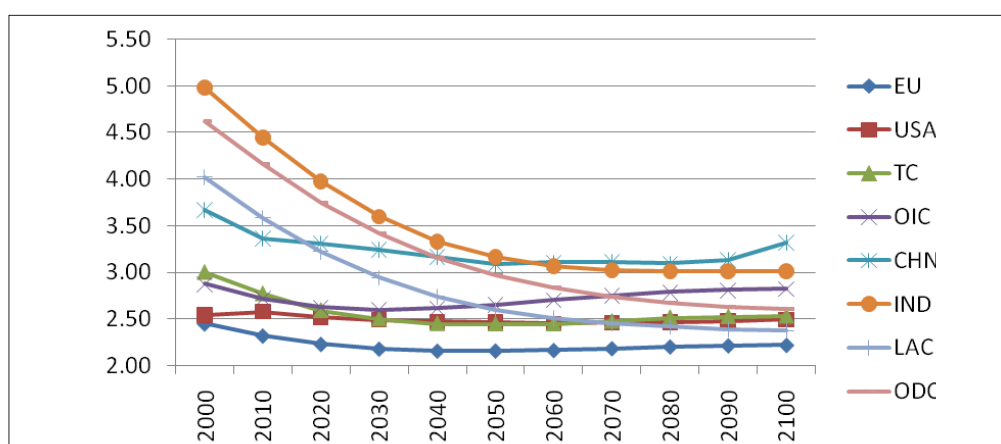
The household

A major aspect of population composition is the size and composition of households. It makes sense to consider the household—defined as ‘a group of people who usually eat and sleep together in the same dwelling’—rather than the individual, as the unit of analysis for purposes of modelling GHG emissions. To a large extent, the household is a unit of consumption and in many developing societies, a unit of production as well.

A study on the demographic impact on energy use in developed countries found that increase in population size accounts for just one-third of the total increase in energy consumption, whereas the number of households accounted for 76% of the increase (MacKellar et al. 1995). Changes in household composition were found to be the major reason for this correspondence, as these changes resulted in larger proportions of smaller households and, thus, increased per capita energy consumption. Hence, while population growth had actually slowed and did not keep pace with the increase in energy consumption, the numbers of smaller households, with higher per capita energy consumption, had increased.

Figure 5 Trends in average household size, 2000–2100, major world regions

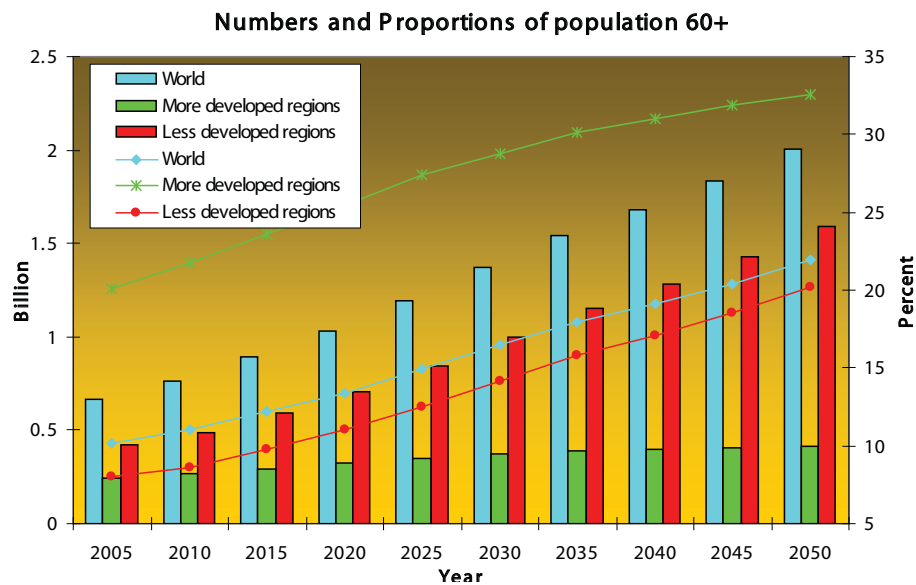
Source: Jiang & O'Neill, 2009.



In developing countries, especially those that are currently going through the fertility transition and rapid urbanisation, similar effects are likely to exist. Families with fewer children are likely to have higher per capita energy consumption, while households in urban environments tend to be smaller (and wealthier) than rural households and thus consume more energy per person.

Ageing

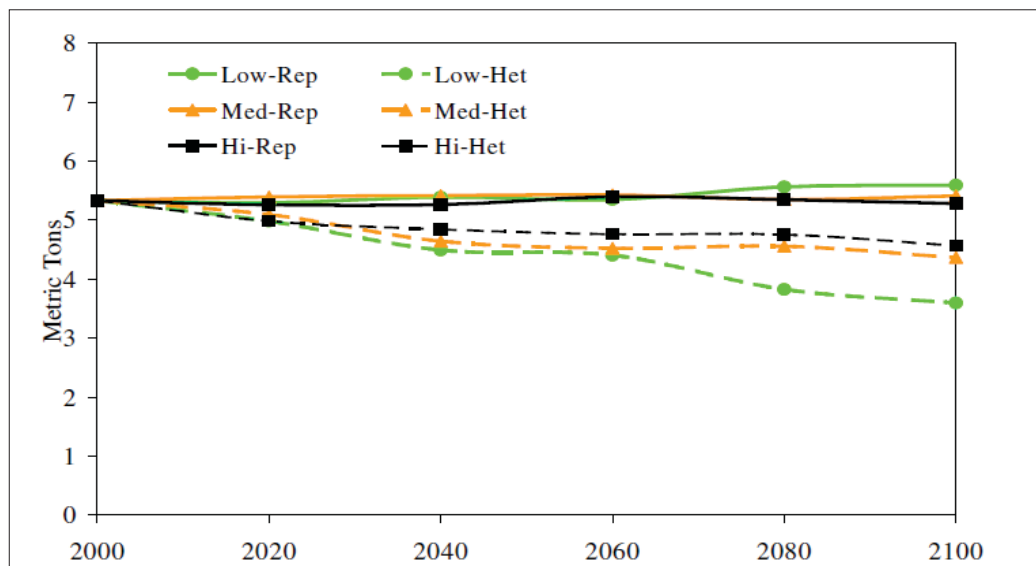
Globally, the number of elderly persons (aged 60 and over) is projected to increase from around 670 million in 2005 to over 2 billion by the year 2050 (UN Population Division, 2008). This growth is by no means limited to developed countries. The increase in proportions of elderly is nearly the same in the developing countries (taken as a whole) as compared to the developed countries. In fact, after the year 2035 the growth rate of the elderly population in the developing countries is expected to surpass that of the elderly in the developed countries. Figure 6 serves to illustrate the trends in absolute and relative numbers of elderly.

Figure 6 World ageing trends

Source: UN Population Division, 2008

The impact of ageing is subject to some controversy. MacKellar et al. (1995) argue that ageing would lead to an increase in household formation rates, accompanied by a decline in the average number of persons per household. As smaller households consume more energy per person than larger households, the net effect of ageing would be an increase in GHG emissions.

A study by Dalton et al. (2005) comes to entirely different conclusions. Based on US households and detailed consumption data, the study finds that 'demographic heterogeneity (i.e. ageing) in the low population scenario reduces per capita emissions by about two metric tons per person by 2100'. This represents a reduction in per capita emissions of around 40%. In the high and medium scenarios the reduction is found to be somewhat less, but at least 15%. See also Figure 7.

Figure 7 Per capita GHG emissions under different household ageing scenarios

Source: Dalton et al. 2005

The authors attribute these findings primarily to the changes in labour supply that result from ageing. Ageing implies fewer young workers, whose per capita labour contribution tends to be relatively greater. It is particularly in their low scenario where the scarcity of young workers is shown to have substantial effects on per capita emissions. The range of per capita emissions between low and high population scenarios is about one ton per person by 2100, but because of population momentum, these effects are not apparent until after 2050.

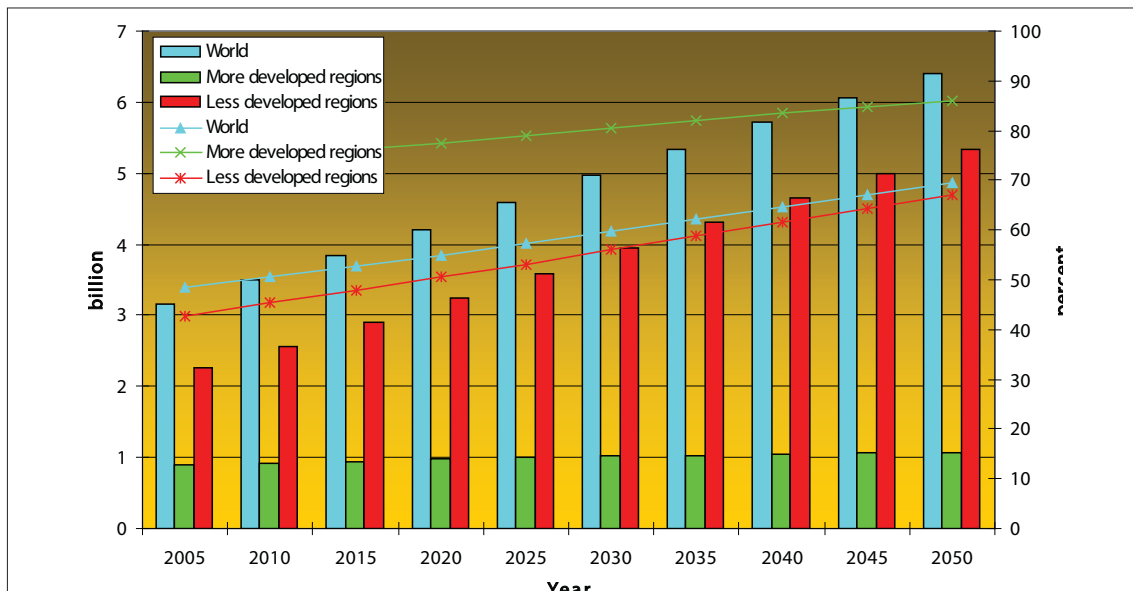
While there remain some uncertainties with regard to the impact of ageing, the above results are largely confirmed by findings for China, using a similar model (Dalton et al. 2007). In brief, it was found that while urbanisation contributes to increased emissions in China due to higher per capita fossil fuel consumption in urban areas, ageing would contribute to higher GHG emissions up to the year 2030, but to lower emissions thereafter, as the proportion of the population of labour force ages declines.

The authors of these studies concede that their models did not account for changes in household size, or a possible trend of increasing rates of labour force participation amongst elderly persons in the future. While these factors are likely to have an impact on the results, the real issue is the importance of taking these different demographic factors into consideration in future emission scenarios.

Urbanisation

Even more so than ageing, urbanisation is a global phenomenon and represents an important demographic trend. The UN Population Division 2007 World Urbanization Prospects puts the world's urban population at a total of 3.2 billion people, or 49% of the world's population. By 2050 this is projected to have increased to 6.4 billion and 70%, respectively. The urbanisation trend is progressing relatively faster in the less developed countries as a whole, throughout the projection period. See also Figure 8.

Figure 8 World urbanisation trends



Source: UN Population Division, 2007

Popular knowledge has it that cities account for 75–80% of all GHG emissions worldwide. Statements to this effect can be found across a wide spectrum of publications, ranging from UN Habitat to Population Action International and the Clinton Foundation. Its actual source remains unclear, however. Recent figures from the IPCC result in an altogether different estimate and indicate values that range between 31 and 40% (Satterthwaite 2008). If these values are taken as more representative of reality, then the conclusion would be that cities produce less than average GHGs, on a per capita basis.

The ensuing debate on this topic has no clear resolution. Arguments abound in favour and against the proposition, often focusing on the need to allocate GHG emissions to where consumers are located. More importantly, perhaps, is the need to distinguish between cities and urban areas. Many urban areas do not qualify to be called cities and thus, would not contribute to emissions from cities.

What follows is a summary of some possible arguments supporting the notion that cities contribute relatively less to GHG emissions:

- better enforcement of environmental controls
- location of GHG producing industries outside city boundaries
- wealthiest consumers living outside city environs
- economies of scale in cities (apartments)

- proximities and agglomeration effects
- agricultural activities and deforestation are major GHG producers.

On the other hand, there are valid arguments against the notion:

- GHG emissions from production located outside city limits but serving city consumers should be attributed to city GHG emissions
- evidence for Beijing and Shanghai shows per capita GHG emissions more than 200% of the national average. This suggests that similar values may be expected for other poorly planned cities (most of which are in developing countries)
- household sizes tend to be smaller in cities
- per capita consumption of manufactured products tends to be higher in urban areas.

Figure 9 provides some facts and figures that may help shed some light on this debate.

Figure 9 GHG emissions for selected cities

City and Country	GHG emissions per capita (tonnes of CO ₂ equivalent)	National GHG emissions per capita (tonnes of CO ₂ equivalent)	City emissions as percentage of national emissions (per capita)
Barcelona, Spain	3.4	10.03	33.9%
Glasgow, UK	8.4	11.19	75.1%
London, UK	6.2	11.19	55.2%
District of Columbia, USA	19.7	23.92	82.4%
New York City, USA	7.1	23.92	29.7%
Toronto, Canada	8.2	23.72	34.4%
Rio de Janeiro, Brazil	2.3	8.2	28.0%
Sao Paulo, Brazil	1.5	8.2	18.3%
Beijing, China	6.9	3.36	205.4%
Seoul, S. Korea	3.8	6.75	56.3%
Shanghai, China	8.1	3.36	241.1%
Tokyo, Japan	4.8	10.59	45.3%

Source: Dodman, 2009

Wealth and consumption

While the demographic factors discussed so far are of major importance in the study of GHG emissions mitigation, they are not sufficient to explain the variations and trends that are observed in GHG emissions. Wealth and consumption are attributes of people, and thus, exert their impact on GHG emissions in conjunction with demographic factors.

The importance of linking consumption with demographic factors already became evident in the course of the discussions in the previous sections of this paper. It either implicitly or explicitly helped explain results of the various studies that were discussed:

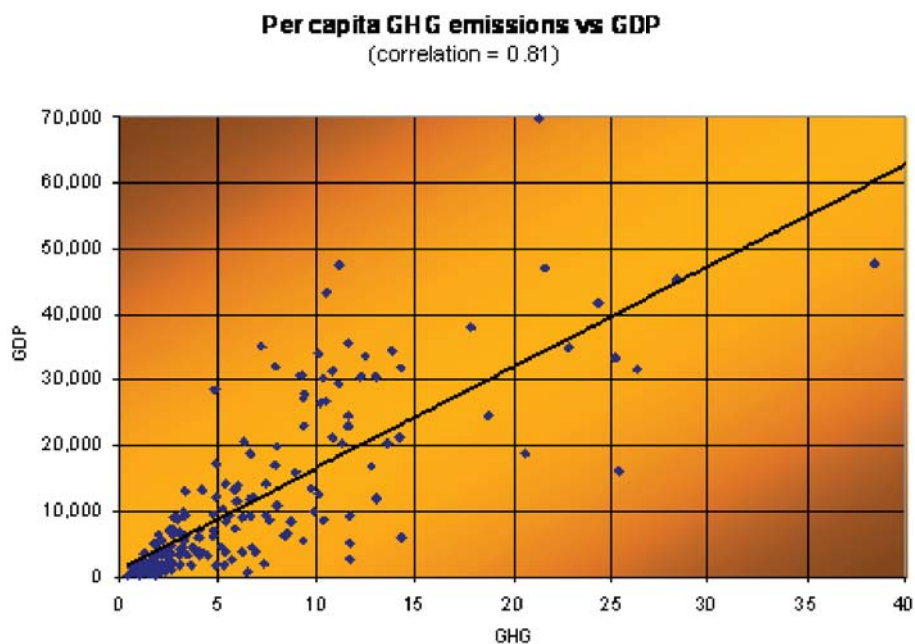
- CO₂ emissions are more related to income and per capita GDP than to urbanisation per se (UN Habitat 2008).
- Impact of ageing was shown to be linked to different consumption patterns of households by age of head of household.
- Family planning as proposed by OPT would have a major impact on GHG emissions in the USA, despite relatively low fertility—because per capita consumption levels are very high.

On a global scale, and measured at the level of countries, the relationship between per capita GHG emissions and per capita consumption is evident (r-squared of 0.81).

Emissions increase sharply when per capita GDP is below US\$10,000, but they start to slow over the US\$15,000 level. Some nations, such as France and Germany, have seen their greenhouse-gas emissions fall despite increases in income. Greenhouse-gas emissions generally still increase with income, however. Second, countries with similar levels of income can have very different levels of emissions. North American countries and Australia have similar levels of income to European nations and Japan, but twice their greenhouse-gas emissions. This is primarily because of differing policy orientations. Europe and Japan emphasise public transport and energy

efficiency and levy energy and climate taxes; the cost of fuel in Europe is around twice that of the United States. This shows that different methods of production and lifestyles can have a major impact on emissions.

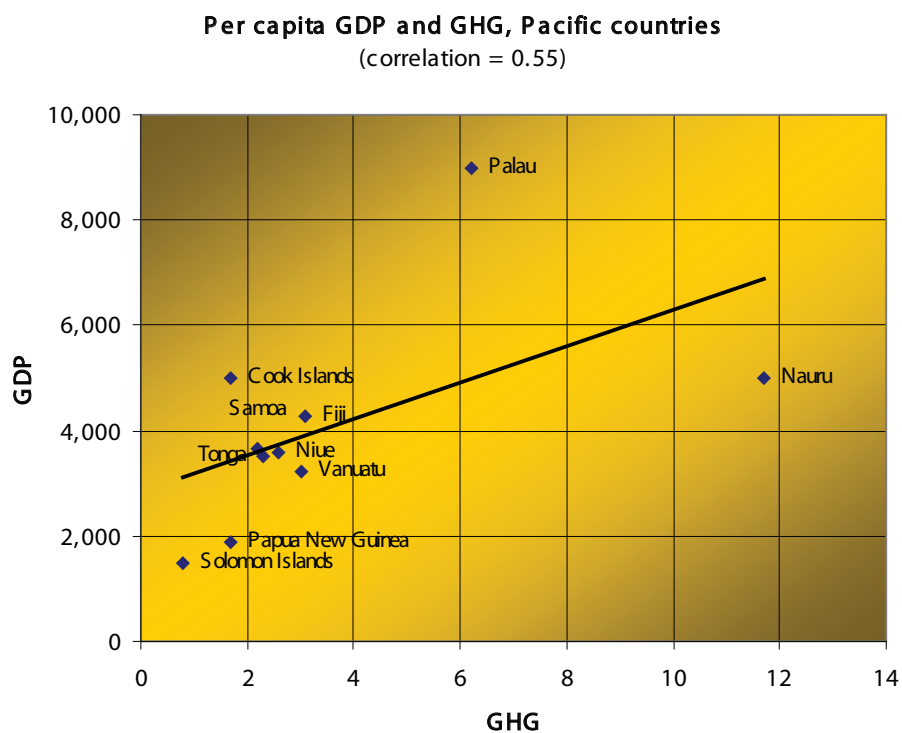
Figure 10 Per capita GHG emissions vs GDP



Source: World Resources Institute—CAIT.

The available data for countries in the Pacific suggest that the indicated correspondence between per capita GDP and GHG emissions remains valid. The correlation is less strong, which is largely explained by the fact that there are relatively few data points, out of which there is one that occupies the extreme edge of the scale, thereby skewing the correlation results (eliminating the data point for Nauru increases the correlation to 0.80).

Figure 11 Correspondence between per capita GDP and GHG for Pacific countries



Source: World Resources Institute—CAIT

Messages for Copenhagen

The previous sections of this paper bear the overall message that population factors need to be incorporated in all climate change research, discussions and negotiations. Their importance with regard to mitigation has been amply demonstrated in these sections.

The main messages for delegates to take into consideration with regard to the forthcoming Copenhagen climate change conference are formulated below.

- Growing emissions of greenhouse gases resulted from unsustainable patterns of production, transportation and consumption. Rapid population growth over the past century exacerbated its effects.
- Mitigation and adaptation efforts should be given equal consideration. Poor mitigation commitments and actions will impose a higher demand on adaptation measures and will require additional funding.
- Analysis of population trends, population distribution and urbanisation is needed to prioritise both mitigation and adaptation actions.
- Adaptation planning should give priority to the most vulnerable communities and groups, such as women, particularly pregnant women, children, elderly, disabled and indigenous people.
- Support to address climate-induced displacement and mobility should be recognised as an important method of adaptation.

These messages need to be reflected in the outcome document of the Copenhagen conference, of which a draft version is available on-line, at URL http://maindb.unfccc.int/library/view_pdf.pl?url=http://unfccc.int/resource/docs/2009/awglca6/eng/inf01.pdf

The following are proposed elements on population issues to be included into the Copenhagen outcome on Climate Change (suggested additions are shown in bold).

- **Page 29, para (i)**

Prioritise the adaptation needs of the most vulnerable communities and groups, such as women, children **and indigenous people**.

- **Page 38, para x.2. (b) and (c)**

Parties should promote adaptation planning by:

(b) Implementing planning that is multi-sectoral, includes prioritisation of adaptation actions, gives priority to the most vulnerable, and makes use of the best available scientific information and analytical tools, **including analysis of population trends and population distribution;**

(c) Integrating adaptation into development planning processes, strategies, and tools at multiple levels and across sectors, developing national adaptation plans, **including pro-active urban planning** as appropriate, and reviewing and reporting on these activities;

(f) Enhancing or developing the needed information and knowledge base (biophysical, **demographic** and socioeconomic), including improving scientific research, data systems and data collection . . .

- **Page 45, Alternative 3**

[Activities related to national and international migration/planned relocation of displaced individuals and peoples due to the adverse effects of climate change]

(e).1 Improve knowledge of the socio-economic aspects of climate change and promote the integration of socio-economic and demographic information into impact and vulnerability assessments.

(e).1 bis Provide support to address climate-induced displacement and mobility as an important method of adaptation;

(e).1 ter Develop contingency planning for vulnerable areas and populations, as well as pro-active urban planning for anticipated growth of vulnerable urban populations;

- **Page 53, Alternative to para 31:**

[In order to bridge short-term actions to medium and longer term actions . . . in order to support the preparation and implementation of NAPAs . . . the creation of databases for climate **and population** data, and targeted capacity-building for long-term planning.]

Concluding remark

The fact that PICs are amongst those countries that are likely to become the most affected by the consequences of climate change while having contributed virtually nothing to this problem gives them a strong moral right to demand decisive action at climate change negotiations. Adequate mitigation measures are an integral part of such action and need to account for the primary driving force of climate change: the population dimension.

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Plenary 11

Trade negotiations (PICTA, PACER Plus), labour mobility and PIC development

Wadan Narsey

Keynote address

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PICTA, PACER Plus and PIC development: what are our options?

Wadan Narsey

Introduction

Pacific Island countries (PICs) have signed a wide array of regional and international trade and aid agreements:

- MSG: Melanesian Spearhead Group Trade Agreement (Papua New Guinea, Solomon Islands, Vanuatu and Fiji)
- PICTA: Pacific Island Countries Trade Agreement (Forum Island countries excluding Australia and New Zealand)
- PACER: Pacific Agreement on Closer Economic Relations (PICs, Australia and New Zealand)
- EPAs: Economic Partnership Agreements with the EU (post 2007)
- WTO: World Trade Organisation (Papua New Guinea, Fiji and Solomon Islands)
- USA Special relationships: Compacts of Free Association (Palau, Republic of the Marshall Islands and Federated States of Micronesia)
- New Zealand special relationships: Cook Islands, Niue
- SPARTECA: most southern PICS, Australia and New Zealand

The objectives of all these regional agreements are similar: accelerate PIC economic development, create employment, increase incomes, improve standards of living and reduce poverty. The general method of doing so is through the gradual elimination of tariff and non-tariff barriers to trade (over ten to twelve years) under conditions of fair competition with clear rules for trade (Rules of Origin etc). The fundamental mechanism of the agreements is the creation of (a) a larger market to encourage economies of scale amongst PIC companies, (b) higher levels of investment and (c) better competition.

These regional trade agreements are supposed to be stepping stones to further economic integration in the global economy under WTO rules: to prepare PIC businesses for harsher international competition under the WTO, to prepare governments for necessary fiscal reforms (to cover loss of import duties), and put in place legislation or regulations (product standards, phytosanitary measures, quarantine, customs).

All these regional agreements have protection built in for weaker partners in PICTA (those defined as less developed countries and small islands states), indigenous peoples and infant industries which may be put onto negative lists.

The regional agreements are also supposed to have the advantage of locking the signatory countries into commonly agreed-on economic integration policies so that PIC governments do not reverse regional agreement policies because of local lobby groups. Aid incentives were supposed to be provided by Australia and New Zealand to assist the PICs with the integration attempt. It was also surmised that PICs may be able to get better concessions from the EU on the EPAs, supposedly because of special treatment given by the WTO to regional trading blocks. Lastly, the small PICs were supposed to be able to speak with one voice in international forums.

These expected benefits have all turned out to be quite insubstantial. In an earlier article,¹ various studies were quoted to argue that if PICTA excluded Australia and New Zealand, the benefits would be minimal, whereas inclusion of Australia and New Zealand would result in large benefits. International studies have shown that regional trade agreements amongst small, closed and developing economies rarely led to faster growth, while those economies that liberalised broadly grew faster in both the short and long term, but slower after regional trade agreements. More importantly, developing countries were better served by “north-south” than by “south-south” agreements.

¹ “PICTA, PACER and EPAs: weaknesses in Pacific island countries’ trade policies”. *Pacific Economic Bulletin*, Vol.19 No 3. 2004.

Essentially, most PICs (except Papua New Guinea) have small or even tiny populations, low incomes per capita, lack of regular communications links, lack of developed infrastructure and virtually similar resource endowments. Further, most PIC producers are not geared to export drives and regional competition. If PICTA does work as expected, then the end result may be one firm, probably from a larger PIC (Fiji and Papua New Guinea being the most likely), supplying the entire PICTA market and driving out small producers elsewhere amongst the smaller PICs. Markets might also end up being dominated by monopolists or oligopolists who would capture the benefits of trade diversion, not consumers. Any trade creation or any effective competition would be unlikely.

It is also quite unlikely that there will be any great increase in investment in the PICTA region. Investors may invest only if capital can be returned quickly by use of monopoly power and/or tariff protection against non-PICTA products. The high tariff barriers towards non-PICTA countries will lead to high costs to consumers. The PICs may also compete with each other to obtain foreign or local investment through tax incentives, thereby reducing their own benefits.

Ultimately, any PICTA gains would be eroded if PIC economies came under the ambit of freer trade under PACER and, eventually, the WTO. The internationally competitive firms would still drive out the local firms except in key niche markets.

There would probably be strong lobby groups fighting against the deregulation and the inevitable redundancies.

The reality of PICTA: costs and benefits of removal of protection under integration

Since PICTA has come into operation, the reality has been that many new exports under PICTA (soap, canned meat, ice cream, fruit juices, toilet paper), usually from Fiji or Papua New Guinea to the other smaller PICs, have been opposed by local lobby groups. The latter have inevitably succeeded in re-establishing protectionism, under one pretext or another.

A blatant case was the export of kava from Vanuatu to Fiji. Normally, the smaller PICs have little to export to the larger PICs, and Vanuatu kava was one rare product that did have a market in Fiji. But the Fiji kava producers' reaction to imports of Vanuatu kava was absolutely scandalous, given that the Fiji Government had not only signed PICTA, but stood to be the biggest beneficiary under it. More scandalous still was the Fiji authorities' response in protecting the Fiji kava producers' interests². The unfortunate reality is that few PIC countries really believe in abiding by PICTA, even though they have signed the agreement.

The reality is also that under any economic integration—whether PICTA, PACER, PACER Plus, EPAs or WTO—inefficient manufacturers in the PICs will have to close down or severely reduce production. Those who oppose economic integration focus almost completely on the losses of local jobs, losses of government revenue from lost import duties, and the demise of local businesses. Many governments fear the political fall-out at election times. Indeed, many economists believe that unilateral reduction of duties would be good for PICs overall, even if there are short-term costs, and PICs receive nothing in return.

Rarely in the Pacific is there a strong voice raised in defence of the removal of protection, couched in terms of the far greater benefits to consumers. But such arguments may be easily substantiated through very simple text-book analysis, which not only shows the costs in dollars, but also shows the intangible costs, such as the restriction of choice of products to local products of lower quality. The presentation at the RSPD took the participants through one such simple analysis of a commonly purchased product (tinned fish) where, to protect jobs worth perhaps \$500 thousands, consumers were made to lose more than \$18 millions, while government gained \$10 millions of revenue from import duties, and the producers made an extra \$6 millions in profit. There is also a “dead-weight loss” of some \$2 millions.

The real problem is that while the loss to consumers in totality is usually large, the loss per consumer or household is usually small, which is unlikely to encourage any great lobby group. The PICs unfortunately do not have strong consumer associations who understand the economics of protectionism and the enormous costs to consumers, and they are backed by solid government economists who know what is good for society as a

2 “The kava kerfuffle: do we believe in the MSG?” *Islands Business*, September 2004.

whole. On the other side, of course, are the powerful lobbies, who stand to lose substantial sums and are quite willing to act in their own interest.

It is also not well understood by the general public in PICs that, if protection is applied to many essential consumer and producer items, the basic cost of living for all people is artificially raised; hence their wage demands, thereby discouraging the economy overall.

PACER and PACER Plus

Under the original PACER signed by PICs with Australia and New Zealand, Article 6 stipulated that if any PIC “commences formal negotiations for free trade arrangements” with any other developed country, then they must commence similar free trade arrangements negotiations with Australia and New Zealand. Alternatively, they must commence PACER negotiations eight years after PICTA was initiated.

The current position of Australia and New Zealand is that claim that PACER has been triggered by Papua New Guinea and Fiji’s preliminary EPAs with the EU. However, in the aftermath of the military coup in Fiji, Australia and New Zealand have succeeded in excluding Fiji from the initial PACER negotiations by claiming that what is being discussed is a much wider agreement to be called Pacer Plus, which will be a separate legal entity from PACER. While Fiji is challenging its exclusion from PACER Plus negotiations, it is a moot point what significance PACER Plus can have for Australia and New Zealand, if Fiji, its largest market in the Pacific other than Papua New Guinea, is excluded.

What cannot be doubted is that, should PACER Plus come into being, there will eventually be major reductions of import duty protection in PICs and the closure of many factories that will not be able to compete with more efficient exports from Australia and New Zealand. While there may be significant losses of import duty revenues for some PIC governments, much of that can be prevented by restructuring tax systems, albeit it at some social cost if regressive taxes such as value added tax have to gain prominence.

The unfortunate reality, however, is that few PICs, if any, have taken any measures to prepare PIC manufacturers for the impending adjustments which will inevitably be required of them. PIC governments have not planned how they intend to protect the major losers from the reduction of protectionism in a socially acceptable manner.

Indeed, it is quite extraordinary that, despite more than a decade of work by the Pacific Island Forum Secretariat (consultants, administrators), a decade of meetings between ministers, trade officials and NGOs, and the expenditure of millions of dollars of preparatory work, most PIC governments have not even analysed the long-term viability of industries/firms affected by PICTA, PACER Plus or the EPAs. There has been little empirical estimation of the tradeoffs between employment, taxes, and losses of consumer surplus and choice and producer surplus.

Some seven years ago, this author did a study for the Pacific Island Forum Secretariat examining the implications of the alcohol and tobacco industries being included in PICTA.³ In the report of the study, the author projected the likely consequence for the PIC alcohol and tobacco industries, if PICs went further and eventually integrated with Australia and New Zealand under PACER. The results are likely to be devastating for the alcohol and tobacco industries in PICs, both of which are currently dominated by multinational corporations.⁴ It is not clear at all whether the recommendations of that report on the need for extensive industry-by-industry studies throughout the PICs have been carried out.

What should PICs look for in PACER Plus

PACER Plus has the potential to be of great development benefit to PICs and their people. It is important, therefore, for PICs to be clear on what benefits they would wish to negotiate for, in return for the concessions they are likely to be required to make by Australia and New Zealand on import duty concessions and freedom of movement of capital and companies.

3 *The Integration of alcohol and tobacco products into PICTA*. Report for Forum Secretariat. 2002.

4 The irony was that only Fiji could be said to have a genuine tobacco industry, where the bulk of the tobacco was grown within Fiji. The others all imported their major input requirement.

First, it would be important to ensure that Fiji is included in the negotiations. This is necessary, as PACER Plus is really PACER under another name, and also the Fiji market is an important negotiating chip for PICs.

Second, it would be useful not to repeat the negotiations mistake of PICTA, which became a long drawn out affair, stretching over several years, with meeting after interminable meeting between trade officials, ministers and NGOs, discussing interminable consultancy reports, enmeshed by legal battles. PICs are unlikely to win any of these battles, given the far superior resources that Australia and New Zealand can and will throw at the negotiations. PICs need to be confident that the value of benefits they are able to win from PACER Plus will be so unambiguously in their own interests that fine calculations are unlikely to change their decision.

The primary benefit that PICs must win, and win in substance, is access for unskilled PIC workers to the labour markets of Australia and New Zealand. It has to be accepted that both Australia and New Zealand face enormous pressure from their own unions to discourage guest worker schemes, which inevitably place a downward pressure on their wage rates and employment. During elections, political parties can easily give in and reduce access or even put a stop to PIC labour mobility. Making labour mobility an inherent part of PACER Plus will enable ANZ politicians to withstand such domestic pressures, as it would then be seen as an integral and binding part of PACER Plus.

The experience of all PICs that have received substantial remittance earnings over the last thirty years is ample evidence of the large development benefits to PICs of having their unskilled (and skilled) workers abroad in developed countries. In Fiji, in the last eight years, the value of remittances has even exceeded the export earnings of the sugar industry. In contrast to the considerable support that taxpayers have given the sugar industry, no such comparable input has been required for those that send remittances home. It is also the case that the remittance flows to Fiji's rural areas far exceed the loans to agriculture by the commercial and development banks.

PICs might wish to request other forms of deployment of their working people to Australia and New Zealand. One possible area with the potential of significant long-term benefits is the revolving deployment of military and naval personnel to the Australian and New Zealand armies and navies. This could well be a win-win situation. Both Australia and New Zealand face great difficulties recruiting their own citizens into the military, while PIC military personnel are all too keen to enlist, even with private companies serving in danger zones such as the Middle East. Several PICs (especially Kiribati and Tuvalu) have citizens who show great aptitude for the naval forces and the international shipping lines.

Many PIC budgets are facing pressure to keep financing their expanding military and naval divisions. Deployment of PIC personnel in Australia and New Zealand would not only take them off the PIC budgets, but also improve their professionalism. The personnel would no doubt receive remuneration significantly higher than what they receive in their home countries. It might well be that a fraction of the deployment could be offered permanent employment in the Australian and New Zealand institutions, improving the ability of these two countries to contribute to international peace-keeping duties, while better safeguarding their strategic interests in the Pacific and Indian Oceans, on land and sea.

It is something of a tragedy that, for more than a decade, Australian and New Zealand rugby unions have resisted PIC calls to be allowed entry into the Super 12, the Super 14, and now the Super 16 rugby competitions. Not only would there be the usual benefits for PIC rugby unions, but it would also benefit their tourism industries, which are likely to be the saviours for PIC economies over the next decade or so. Furthermore, there has been no systematic attempt by Australia and New Zealand to integrate with PICs in sports (rugby, soccer and netball being the primary candidates) and neither is there any serious attempt at integration in the arts and culture.

PICs face an almost insurmountable problem in trying to create infrastructure that is necessary before widespread investment can take place. Nearly all PIC budgets are under long-term financial strain, and their economic growth prospects are not good at all. PICs struggle to retain their qualified human resources, and the inevitable placement of unqualified or under-qualified persons in positions of responsibility inevitably results in inefficiencies in decision-making, to the extent that even the small amounts of available capital funds are inefficiently utilised, resulting in the deterioration of infrastructure. The PICs' systems of roads, water, electricity, sewerage are all stagnating at best, or rapidly deteriorating, with government funds grossly inadequate even for maintenance. The serious loss of teachers and medical professionals (doctors and nurses) has also led to the inevitable decline in the standards of public education and health care that PIC governments can provide from their own taxpayers' base.

It is essential, therefore, that Australia and New Zealand seriously re-orientate their aid programmes to provide core financing of capital investment in PIC infrastructure that will create the essential pre-conditions for healthy private investment in PICs.

One of the odd bits of advice given by many economic advisers to Australia and New Zealand is that there should not be any specific guidelines given as to viable and sustainable investment areas in PICs—"do not pick winners". This is somewhat odd, as advisers have no compunction in pointing out what PICs are doing wrong or are clear losers, e.g. publicly subsidised import substitution industries. It would be far more useful if Australia and New Zealand were to identify what will be WTO-compatible sustainable industries in PICs, and encourage joint investment in such comparative advantage areas. Clear possibilities would be those associated with tourism, timber and marine resources, and service industries like retirement homes⁵ and call-centre industries. Such joint investments would bring in the kinds of entrepreneurship and technology that are currently generally lacking in PICs (except in small pockets) and which could undoubtedly accelerate economic PIC growth, improve standards of living and reduce poverty.

If these possibilities were to become a reality, even if there were no legal agreement to ensure the above measures, then, effectively, the PICs would have become virtually integral parts of Australia and New Zealand, like any of their remote regions such as Alice Springs or Stewart Island. The qualified young persons would keep migrating to the centres looking for better employment opportunities, while the federal government would still maintain the essential rural infrastructure to standards necessary to retain people. There would be free movement of persons and capital.

Naturally, in such a relationship, PICs would also need to come to terms with one of the essential requirements of economic integration—the diminution of the discretionary powers of the partner states. PIC governments would need to reduce their own discretionary and often practised powers regarding the movement of foreign capital and persons. PIC leaders would need to consciously concede that the greater good of their ordinary PIC people in terms of their labour mobility to Australia and New Zealand and freer access to Australian and New Zealand goods and services to PIC markets and consumers, would be more than enough to compensate for the reduced discretionary powers of PIC political leaders. The challenge will be for PIC leaders to make this concession for the sake of their people, and not be over-ridden by personal attachment to discretionary political power.

Multilateral or Bilateral PACER Plus?

One of the critical negative experiences of the PICTA process was that negotiations amongst PIC governments were long, drawn out protracted affairs as the Pacific Islands Forum Secretariat sought to obtain consensus amongst all the PICs. This was extremely difficult to reach because of all the differences of opinion amongst the stakeholders about the usefulness of the integration measures being proposed and the relative influences of all the stakeholder interests. Often, powerful local manufacturing lobbies had over-riding influence over the government representatives, who had little understanding about the long term welfare interests of their consumers and economies. It would be a pity if this were replicated in PACER Plus negotiations.

In fact, individual PICs might wish to investigate the possibilities of bilateral negotiations with Australia and New Zealand, who might in turn find it easier to accommodate bilateral PACER Plus with select PICs. Bilateral PACER Plus negotiations would naturally short-circuit many of the difficulties of finding a region-wide PACER Plus agreement. One advantage of bilateral negotiations would also be that the first countries successfully concluding the agreements would get in on the ground floor, e.g. with labour mobility. Those countries coming later may find it more difficult. This would encourage PICs to reach speedy agreement on PACER Plus, instead of dragging out the negotiations year after year.

PIC-PIC assistance?

One of the ironies in discussions about PACER Plus is that the focus inevitably has been on relationships between PICs on the one hand, and Australia and New Zealand on the other. Very rarely have PACER discussions been couched in terms of PIC-PIC possibilities. This may be understandable, given that there are not very many

⁵ Note that such an industry based on overseas retirees would require PICs to rethink their laws regarding the long-term residence rights of non-citizens.

complementarities between PICs, as the weaknesses of PICTA well illustrate. But this is not to say that there are no fruitful avenues where PICs may provide solutions to each others' problems through PACER Plus as well as PICTA.

One wonderful window of opportunity arises out of the fears that atoll countries like Tuvalu, Kiribati, Marshall Islands and Federated States of Micronesia have over the damaging consequences of any significant sea-level rising resulting from global warming. These countries have been looking to the developed countries for assurance that they would accept climate change refugees should the need arise. Yet there is also the fear that the movement of the atoll peoples to the developed countries could lead to a rapid erosion of cultures and traditions. This, however, would be less likely, if the movement were to other tropical countries which offer some refuge from sea-level rising.

Fiji, Solomon Islands and Vanuatu are well enough endowed with land resources (close to the sea) to be able to make generous land/sea areas available to the atoll countries at appropriate prices, to resettle some number of climate change refugees. This could be a win-win situation for both the settlers and the host country.

The refugees would find their new host countries' land resources extremely hospitable, compared to their own original environments, and they would have little difficulty in maintaining subsistence livelihoods, as a bare minimum. They would also be able to work in other cash jobs in the economy. If the settlements were chosen to be near the tourism industry, atoll cultural groups could derive incomes from cultural shows, adding diversity and depth to the Fiji tourism product. Being in a country smaller than Australia or New Zealand would also enable the settlers to maintain their culture and tradition, while their relatively small numbers would not threaten the host countries.

It should be noted that such a process is already occurring without any fanfare on a small scale in Fiji with moderately large numbers of Tuvaluans living there, largely for the education benefits being enjoyed by their children. The challenge would be to formalise the arrangements for mutual advantage.

What could the atoll countries offer the host countries? Virtually all atoll countries have large trust funds which to date have been invested in the stock markets of the developed countries. With many of these investments doing quite badly in the recent global financial crisis, some diversification may be a very useful defense mechanism for the future. One avenue could be the investment of a small part of the trust funds in the foreign reserves of the host countries. To protect their international value, these investments could be denominated in international currency, which would bolster the host country's foreign reserves. The host country could also consider giving the displaced persons normal citizenship or residence rights.

Such exercises might signal a small but very real step towards genuine PIC integration with free movement of persons as well as goods and services, as was originally envisaged under PICTA. While the free movement of persons has always been a sticking point for many of the smaller PICs, it may be noted that the Cook Islands has in recent years reversed its policy stance and been granting work permits for dozens of tourism industry workers from Fiji. This would have been unheard of ten years ago.

Conclusion

While there will no doubt be some adjustment costs to being part of a PACER Plus, PICs should not hold back on negotiations, as the benefits are likely to far outweigh the costs. The critical cost of PACER Plus integration will be loss of employment in PIC industries that are not able to survive the reduction of protectionist duties. While the latter will promise more than proportionate benefits to consumers, PICs will need to argue for greater labour mobility for unskilled labour to take the pressure off the job markets and to generate remittance benefits for PICs.

It will also be important for PICs to argue for wider development co-operation on military redeployment, sports and arts integration, infrastructure development, and joint venture investments in WTO-compatible areas.

The larger PICs might note that Niue, Tokelau and Cook Islands already have economic relations with New Zealand that are similar to what the larger PICs might aspire to under PACER Plus with Australia.

Rethinking trade policy for development

Maureen Penjueli

Negotiations for a new free trade agreement with Australia and New Zealand are likely to result in a binding international agreement that eclipses all previous regional initiatives in the Pacific, in terms of its scope and impact. This paper explores the potential dangers arising from a free trade agreement with Australia and New Zealand. It also puts forward some initial suggestions for new trading arrangements that would help to stimulate development in the Pacific Islands. Many improvements can be made to current trading arrangements, including the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) that would allow Pacific nations to utilise international trade more effectively to stimulate development within the region.

Development and trade in the Pacific

The Pacific faces its fair share of development challenges. Nearly 8 million people live across the 14 island-country members of the Pacific Islands Forum (Forum Island countries – FICs). The economic profile of the Pacific is heavily determined by geographical features shared by most Pacific states. The region's smaller islands are remarkably vulnerable to natural disasters and the impacts of climate change. Furthermore, they are dispersed across a large portion of the Pacific Ocean—a defining characteristic that is of the utmost importance in the analysis of the challenges faced by the region and the trade opportunities that it may seize (South Centre 2007). Taken together, the geographical features and high transportation costs of the FICs mean that potential exporters face considerable (but not insurmountable) constraints—such as distance from markets, expensive or infrequent inputs and small economies of scale.

In addition to these ongoing development challenges, the effects of the global economic crisis are also being felt in the FICs, with the region seeing a downturn in remittances and tourism due to economic recession in the developed economies, a fall in demand for exports and a reduction in (already very scarce) foreign direct investment. The combined effects of the crisis are still playing out across the Islands, but already it is estimated that GDP will decline in 10 of the 14 FICs during 2009 (AusAID. 2009:13).

The FICs' economies are still largely rural, with agriculture constituting the primary source of livelihood for most Pacific islanders. Agriculture also comprises a major component of the formal economy in most FICs and agriculture, forestry and fishing account for an especially large share of GDP in Solomon Islands (41%), Samoa (40%) and Tonga (37%). In most other FICs the share is between 15% and 27%—though the share of GDP arising from agriculture, forestry and fishing is much lower in smaller atoll countries. In the Marshall Islands, for example, agriculture represents only 13% of GDP and in Palau only 7% (statistics used in this document are sourced from Scollay 2001; South Centre 2007; Nathan Associates 2007).

The role of traditional economies (including subsistence agriculture and localised food systems) is often underplayed in national and regional development planning in the Islands. A major conference on the economies of the Pacific Islands held in 2009 found that 'governments and donors should recognise the economic and social resilience provided by traditional economies and indigenous systems of governance' and that 'more research is needed on integrating traditional economies with economic growth strategies' (Lowy Institute for International Policy 2009).

The potential for trade in agriculture, forestry and fisheries products, which dominate FIC production structures, tends to be inhibited by transportation costs and quarantine problems, as well as by the fact that the FICs all tend to produce similar products in these sectors. Quarantine compliance is one of the most formidable barriers for FIC agricultural exports to Australia and New Zealand (ANZ) (see 'A development oriented trade agreement' below). The Pacific Island countries also face problems with a long-term decline in primary commodity prices—affecting Pacific agricultural exports (such as cocoa, timber, coffee, vanilla, copra and coconut oil). In recent years, Pacific governments have had to regulate the sale-price for commodities like copra when world prices have fallen through the floor.

Mining and other extractive industries are particularly lucrative in Papua New Guinea, accounting for 27% of GDP. In fact, the export of crude oil and gold from Papua New Guinea accounts for by far the largest share of FIC exports to Australia and New Zealand. Extractive industry exports (primarily from Papua New Guinea)

account for around \$US1.6 billion per annum, approximately four times the value of all other Pacific exports to Australia and New Zealand combined (for details see Nathan Associates 2007:5, 6; Australian Government, Department of Foreign Affairs and Trade 2008:48; Statistics New Zealand 2008:15).

Manufacturing, on the other hand, is not well developed in most FICs. The share of manufacturing to GDP is highest in Samoa (18%) and Fiji (15%), but the figure in Samoa is the result of a single large enterprise, wiring harnesses for the Australian automotive industry. Except for Papua New Guinea's 8%, manufacturing in all other FICs accounts for less than 5% of GDP.

In some cases exports are heavily dependent on trade preferences provided for under existing trade rules, notably Fiji's garment exports and Samoa's wiring harness exports to Australia. Papua New Guinea has the most diversified export base. In addition to its preferential canned tuna exports to the EU, Papua New Guinea's major exports include palm oil, tropical hardwood logs, coffee, cocoa and tea among agricultural products, and gold, mineral ores, natural gas and oil among mineral products.

Several FICs have been successfully developing niche export markets, such as squash from Tonga, black pearls from the Cook Islands, desiccated coconut from Tonga and noni-juice from several FICs. Kava had shown growing potential as an export for several FICs in the late 1990s, but the kava-export industry has faltered following bans on kava-based products in Europe (from 2000) and a ban on the import of commercial quantities of kava imposed by Australia in mid-2007.

Perhaps surprisingly the FICs currently have a fairly limited market for exports to Australia and New Zealand; Australia is the primary export market for only three of the 14 FICs—Papua New Guinea, Fiji (garments) and Samoa (wire harnesses). Japan and the United States constitute the primary export markets for three of the FICs. Most FICs have a limited range of exports to Australia and New Zealand, although Fiji and Papua New Guinea have been able to diversify their exports to these two countries somewhat. Agriculture and agro-foods, fish products, and timber and wood are significant exports—though all are exported to Australia and New Zealand in limited amounts.

Whilst exports from the Pacific to Australia and New Zealand have remained limited, the region (which is heavily import-dependent) continues to rely on Australia and New Zealand for its imports. Either Australia or New Zealand ranks first among import suppliers for 10 of the 14 FICs. Australia tends to dominate exports to the Melanesian countries, Kiribati and Nauru, while New Zealand dominates exports to Polynesian island countries. The USA, unsurprisingly, dominates exports to the Micronesian countries. The FICs, collectively, have a substantial goods-trade deficit with Australia and New Zealand.

Some of the imbalance in goods trade between the FICs and Australia and New Zealand is offset by trade in services, particularly travel and tourism by Australian and New Zealand citizens. While statistics on services trade are limited, it is estimated that around US\$542 million is spent by ANZ visitors to the FICs—with roughly half of that going to Fiji (indicative figure; for explanation see Oxfam Australia and Oxfam New Zealand. 2009:11). However, a large proportion of tourism spending 'leaks' straight back out because large-scale tourism, in particular, is often not closely linked to the domestic economy, meaning that there is sometimes little value added by (and revenue flowing back to) the local economy.

The increasing importance of services trade (mainly tourism) in some of the FICs is significant, and helps to offset some of the goods-trade imbalance. However, there is still a very large gap between PIC (Pacific Islands countries') exports to Australia and New Zealand and their imports, even when services trade is included in the ledger. As a recent report from Oxfam Australia and Oxfam NZ explains:

The [trade deficit] figures highlight that many Pacific Island Countries are both struggling to export *and* having difficulty in competing with imports, as well as failing to gain local benefits from the tourism industry. (Oxfam Australia and Oxfam New Zealand. 2009:11)

Foreign direct investment (FDI) in FIC economies is, by and large, very limited. Prospects for new FDI are dim, particularly in the context of the global economic crisis. A major issue is the remoteness of the islands; together with the small size of their economies—FICs face considerable challenges to attracting investors with other options for their capital—including investors from Australia and New Zealand.

A reciprocal Free Trade Agreement with Australia and New Zealand

Implications of a reciprocal FTA for goods

A reciprocal Free Trade Agreement (FTA) between the FICs and Australia and New Zealand covering trade-in-goods would see Pacific countries lower their tariffs on ANZ imports into the region (and it is likely that Australia and New Zealand will push for a reduction of tariffs on substantially all trade, see above). Taxes on imports (tariffs) from Australia and New Zealand account for a considerable portion of the recurring budget of many FICs.

A report commissioned by the Pacific Islands Forum Secretariat, and completed by Washington-based consultants Nathan Associates, found that under PACER-Plus (if it is designed as a reciprocal FTA), Pacific countries stand to lose tens of millions of dollars each year. That report found Vanuatu stands to lose around 17% of its annual government revenue, as does Tonga, while Samoa and Kiribati stand to lose around 14% of their revenue. Even the bigger countries, Fiji and Papua New Guinea, could lose more than \$10 million each year (Nathan Associates 2007).

If FIC governments offer to lower their tariffs under PACER-Plus they will have to look for other ways to raise money needed to provide public services. This usually means introducing a new tax in the form of a value-added tax (VAT) or goods and services tax (GST). Governments that already have these taxes will be forced to raise them or extend them to areas that are currently exempted. Any increase in consumer taxes is likely to erase much of any potential price reductions consumers may gain through lower tariffs for imported goods.

Taxes on goods and services unfairly penalise the poor. This is because everybody pays the same tax on what they buy, regardless of how much income they earn. A poor person buys bread, cooking oil or other basic goods (and pays tax on it), just as much as a rich person.

Even if these taxes are introduced, it is unlikely that FIC governments will be able to recover the revenue lost through PACER-Plus. Studies by the International Monetary Fund have found that over the past 25 years, low income countries have completely failed to recover government revenue lost from the reduction of import taxes (and that introducing VAT has little impact on meeting the shortfall) (International Monetary Fund 2005). There are recent examples of this in the Pacific. When, in the late 1990s, for example, the Asian Development Bank forced Vanuatu to lower tariffs and introduce a VAT as part of conditions for a new loan, the country suffered massive revenue losses from which it took many years to recover (Oxfam 2005:9).

Businesses and industries in the Pacific Islands Countries face considerable constraints to doing business (such as the frequently mentioned distance from markets, cost of inputs, small economies of scale and lack of human resources). Opening FIC markets to large well established corporations in Australia and New Zealand who do not operate within these constraints may not necessarily make Pacific businesses more efficient: it may instead wipe them out.

Dr Wadan Narsey, Economics Professor at the University of the South Pacific, predicts that under PACER-Plus (if it is designed as a reciprocal FTA) three-quarters of Pacific manufacturing would close down, leading to unemployment for thousands of workers (Institute for International Trade 2008:85). FICs tend to have few or no social 'safety nets'—to retrain these unemployed workers or support them with welfare benefits while they look for other job opportunities—and have even less revenue to fund them.

Implications of a reciprocal FTA for agriculture

PACER-Plus, if designed as a reciprocal free trade deal, is likely to require Pacific governments to trade away their ability to provide some targeted support (and protection) for the development of the agricultural sector, and is likely to lead to greater competition for local food producers.

In recent decades, many Pacific countries have provided direct support to agricultural producers to stimulate activity in the agricultural sector, and to support rural farmers when world prices for their commodities fall alarmingly low. Vanuatu, for example, has occasionally used aid payments to prop up the price of copra when international prices for copra reached catastrophic levels (Gay 2002). For many farmers in remote outer islands in Vanuatu, copra exports are a primary, and in some cases a sole, source of income.

At the World Trade Organisation (WTO), developing countries and LDCs (least developed countries) are entitled to special treatment allowing limited levels of government support for local farmers. Australian and New Zealand trade negotiators, however, have a history of undermining even this small leeway for developing country farmers. For example, during Vanuatu's initial WTO-accession process (suspended in 2001) Vanuatu was told that if it wanted to join the WTO it would have to abandon all forms of export subsidy—including the copra price stabilisation scheme. Under the WTO Agreement on Agriculture (AoA), LDCs *are* allowed to maintain some export subsidies, but Australia and New Zealand, as members of the Working Party assessing Vanuatu's accession bid, decided Vanuatu (as a non-member) should not be entitled to this special and differential treatment.

Vanuatu has also previously used seasonal quantitative restrictions on the import of potatoes, particularly to help develop Irish potato production on the island of Tanna in the northwest of Vanuatu. Under the WTO AoA, current and potential members are obliged to convert non-tariff measures of this kind to tariffs. During Vanuatu's initial WTO accession process, Vanuatu negotiators indicated a wish to protect potato production in accordance with special safeguard (SSG) measures that are allowed under the WTO AoA. These safeguards are designed to allow countries to impose additional tariffs on agricultural products when import volumes exceed defined trigger levels, or when import prices fall below defined trigger prices. However, Australia and New Zealand opposed the use of even this special safeguard mechanism, going so far as to threaten that if Vanuatu did not yield to their demands, their technical assistance to Vanuatu's agricultural sector would be terminated (Gay 2002). These demands contributed to Vanuatu's walking away from its initial WTO accession bid.

To meet WTO requirements and objectives, new and prospective members need to reform their agricultural policies. The government of Samoa, for example, has reformed its agriculture sector in recent years as part of its WTO accession process. This has included removing price-support policies for agricultural products, dismantling marketing boards for coconut and cocoa and removing a government subsidy on agricultural equipment and pesticides sold through the government-owned Agricultural Store. According to one of Samoa's senior trade analysts, Margaret Malua, the effects of removing these supports led to a decrease in agricultural production. She explains:

The consequent increase in prices for agriculture equipment, fertilizers and pesticides meant that they became less accessible for low-income earners; this in turn led to a decline in the level and value of agricultural production. (Malua 2003)

PACER-Plus may also have implications for the ability of Pacific governments to provide support to farmers in the event of natural disasters. In recent years, Pacific governments have provided direct payment to farmers to re-establish their crops following major cyclones. Under the provisions of the WTO's Agreement on Agriculture relating to payments for natural disaster relief (Annex II, Paragraph 8) Pacific governments would face difficulties implementing similar schemes to support farmers recovering from the effects of a cyclone (for example).

Under the WTO AoA, least developed countries face a *de minimis* limit of 10% on domestic support to agricultural producers by commodity. This means that if the value of support to producing that commodity is less than 10% of the value of the commodity, then that commodity is exempt from the WTO restrictions on domestic support. However, in recent years Pacific states have utilised agricultural policy to support domestic agricultural producers, which is likely to have exceeded this 10 per cent *de minimis* limit.¹

PACER-Plus has the potential to exacerbate food-security issues in the PICs. Many Pacific countries have a large and ongoing trade deficit (Vanuatu's trade deficit, for example, has consistently stood at around 25% of GDP). Countries that cannot earn the foreign currency they need to pay for imports are especially susceptible to food security issues in a globalised food marketplace.

According to the proponents of free trade, consumers will benefit from lower prices once tariffs are removed. Experience suggests that in many cases exporters and distributors ('middle men') tend to increase their prices almost back to the same level after tariffs are removed, and fail to pass on the benefits to consumers.² Increases in consumption taxes (to replace lost government revenue) also undermine any benefits. Despite this, there are sound reasons for hoping that prices for some exports to the Pacific will not fall. An increase in imports of cheaper foods could undermine local agricultural systems, and could also have negative health outcomes when poor quality foods (like mutton flaps and turkey tails) become cheaper than local foods.

Pacific countries have among the highest rates of non-communicable diseases (NCDs; like type 2 diabetes) found anywhere on earth. There is a clear link between the increasing prevalence of NCDs in the Pacific and the radical change in diet that has occurred, with fatty waste meat products becoming readily available at prices that make them cheaper than traditional foods like taro (dalo) and fish—and are especially attractive to the urban poor. Fiji, a member of the WTO, has imposed a ban on the import of mutton flaps, claiming there are proven links to obesity. New Zealand threatened retaliation at the WTO, but has backed off doing so, perhaps fearing exposure to accusations that it knowingly dumps unhealthy waste products on the Pacific Islands. People might also ask why NZAID bothers to fund health education programs in Pacific Islands such as Tonga and Samoa.

Following Fiji's example, and in an attempt to improve public health outcomes, Samoa, in 2007, imposed a ban on imports of turkey tail meat (a fatty off-cut imported from the US). Samoa had already tried raising tariffs on the import, but this was not seen as severe enough a deterrent (Radio New Zealand International 2007). Both the raising of import tariffs and the outright ban on imports are policy options that may no longer be available to Pacific countries if PACER-Plus is designed as a reciprocal FTA that meets the requirements of the WTO's AoA.

As a reciprocal FTA, PACER-Plus has the potential to undermine the policy space needed to promote the development of export commodities such as kava, beef, virgin coconut oil, vanilla, cocoa, coffee, pawpaw, pepper, ginger and sandalwood. As well as targeting export opportunities, Pacific countries need to maintain policy options that better link local agricultural sectors to the needs of a growing tourism industry in many countries. Policy options such as the use of government-backed export credit schemes (particularly targeting smaller producers), seasonal (tariff) protection from import surges, and subsidies for agricultural equipment and fertilisers are all policies that PACER-Plus threatens to curtail.

Implications of a reciprocal FTA for services

Services play important social and economic roles in Pacific societies. Important economic sectors include financial services, retail and tourism, while other services (like health, education, water, electricity, postal, communications and waste management) are important ones that should be available to everybody in society. These services play a *social* role with overarching significance for individual and social justice and well-being; it is only recently that they have been thought of as ways to make profit rather than as ways of the obligatory provision of essential services.

An agreement on Trade in Services under PACER-Plus (if it is designed as a reciprocal FTA) would be similar to the WTO General Agreement on Trade in Services (GATS). Any such agreement would open FIC services 'markets' to competition from Australian and New Zealand service providers. Under the terms of such a deal Pacific countries must make commitments about how Australian and New Zealand companies are able to offer services in their countries. As outlined above, Australia and New Zealand are likely to argue that FICs will need to liberalise a high numerical quantity of service sectors (to satisfy the requirements of GATS Article V). FICs would be asked to list the service sectors they would open to ANZ companies under a schedule of commitments. For service sectors listed under any such schedule, two key principles would apply:

- *Market access:* ANZ services and service companies shall be granted full access to local Pacific markets. Some exemptions could be listed when the sector is initially committed under the PACER-Plus agreement but the number of exemptions may be limited by the requirements of GATS Article V. Measures that limit ANZ companies' access to Pacific service 'markets' would be prohibited.
- *National Treatment:* ANZ companies and service providers must receive treatment at least as favourable as local companies and service providers in Pacific countries. Support to local suppliers would be prohibited, unless the same terms are offered to Australian and New Zealand companies as well.

Initial indications are that Australia and New Zealand would push Pacific countries to negotiate services on a 'negative list' basis (for an explanation on Australia and New Zealand's likely insistence on a 'negative list' approach to PACER-Plus see Nathan Associates. 2007:viii). This would have the effect of opening *all* FIC service sectors to ANZ companies unless FICs identify restrictions or exemptions at the outset (during PACER-Plus negotiations). This would be a very difficult task for Pacific trade departments, as the implications of permanently opening service sectors to ANZ competition are often poorly understood—particularly given the capacity constraints of many FIC trade departments and the relative under-regulation of service sectors in many FICs.

A reciprocal free trade agreement with Australia and New Zealand covering Trade in Services would have far reaching consequences for national sovereignty in the FICs, with implications for domestic regulation and policy making.

A number of services (like health and education) represent basic human rights, and under international treaties governments are obliged to provide these services to everybody at accessible prices. A reciprocal free trade agreement covering trade in services could undermine access to services in the Pacific (especially for vulnerable people, like the unemployed, or the rural poor) for two main reasons. First, opening service ‘markets’ could allow foreign companies to pick and choose where they provide services, and to whom they provide them. Companies might provide water, health, education, or power services to wealthy people in the cities and towns, but not extend these services to rural areas or to outer islands. This is especially a concern in the Pacific, where in some countries there are no regulations in place to ensure that everyone has a *right* to access these services. Secondly, opening service ‘markets’ can lead to two levels of services in the country, where the rich get good services, but most people do not. Listing health services, for example, would allow the building of foreign hospitals, clinics and dental clinics. This could lead to an internal ‘brain drain’, where the most skilled health staff are drawn away from the public sector (by means of higher pay and/or better working conditions) leaving poor or remote areas without the people they need to run essential healthcare facilities.

Indigenous peoples across the FICs have a distinctive physical and spiritual relationship with their land based on the concept of custodianship. Most Pacific land is owned communally, and in many FICs communal land ownership is protected under national constitutions.

PACER-Plus may have implications for land ownership in the FICs, as restrictions on foreign ownership of land may be considered a market access restriction for ANZ service providers wishing to establish a new business in an FIC. This would mean FICs would have to change national laws to allow foreign ownership of land. FICs could instead list their restrictions on foreign ownership of land as part of their services schedule (as exemptions under ‘Mode 3’ covering service delivery by the establishment of a *Commercial Presence*), though they will come under pressure to make trade-offs in other areas (giving market access to ANZ companies) to do so.

There are already examples of pressure to allow foreign ownership of land as part of free trade negotiations within the region. At the WTO, for example, the European Union has asked Papua New Guinea and Solomon Islands to remove restrictions on the ownership of land by foreign companies and investors. During Vanuatu’s initial bid to join the WTO, the United States demanded Vanuatu allow private (and foreign) ownership of land. This would have required changes to Vanuatu’s constitution. Vanuatu instead included provisions prohibiting freehold ownership of land under the horizontal section of its services schedule; the US insisted that Vanuatu must make significant concessions in other areas due to this ‘market restriction’.

Commentators in Australia have argued that a regional free trade deal *should* force FICs to reform communal land tenure (and that Australia should offer labour mobility to the FICs in return for this reform) (Peebles 2005:124). A study on PACER-Plus commissioned by the Pacific Islands Forum Secretariat found that ‘possibly the most significant conflict between the indigenous peoples of Forum Island Countries and regional trade integration arises in the economic uses of communally held land and resources’ (Nathan Associates 2007).

Many Pacific countries maintain performance requirements for foreign investment (requiring that foreign investors partner with local investors, employ a quota of local managers or staff, or use a quota of local produce). Many FICs also reserve certain economic activities for nationals. An agreement on trade in services under PACER-Plus could force FICs to do away with these performance requirements as well as reservations as they would be considered restrictions on national treatment under Mode 3 *Commercial Presence* of any such agreement.

Implications of a reciprocal FTA including other ‘trade-related rules’

Australia and New Zealand are likely to be keen for PACER-Plus to include a range of other trade related rules outside of rules governing trade in goods and trade in services. These include new rules on **investment, competition, government procurement** and **intellectual property**. Developing countries have rejected most of these rules for inclusion under the WTO.

FIC's should be especially wary of any reciprocal FTA that contains new rules on investment. An agreement on investment under PACER-Plus would lead to changes in law in the FICs to allow ANZ companies to establish new enterprises (and remove profits) with reduced obligations to the countries in which they invest.

It is common for FICs to use 'performance requirements' to maximise local benefits from foreign investments—and to ensure that all the benefits of new investments do not 'leak' back to the investors' home states. Performance requirements include requirements that new investors partner with local investors or firms, employ a certain number of local managers or staff, or use local inputs in the business venture. An agreement on investment is likely to remove the ability of FICs to use some or all of these performance requirements.

Free trade agreements often include rules regarding 'intellectual property rights'. These rules protect the 'rights' of companies that produce new inventions—meaning only they are allowed to sell that invention, and they can sell it for whatever price they like. 'Inventions' include things like new medicines and education materials (like books, magazines and online journals). Australia and New Zealand are likely to want PACER-Plus to include new rules on intellectual property at least as strong as the rules at the WTO. WTO rules grant pharmaceutical companies 20 years to a patented invention. In countries that have joined the WTO, drug companies can sell their drugs without competition and at high prices, for 20 years—even if that means poor people who need those drugs cannot buy them.

In the Pacific, most countries are not members of the WTO and so these rules do not apply. If they were introduced under PACER-Plus, Pacific governments may not be able to import certain cheaper drugs, and would have to buy the expensive 'protected' medicine. There are already examples of this in the region. In Fiji, the anti-psychotic drug Olanzapine is a patented drug that is costing the Fiji government considerably more to procure than generic versions that used to be available—because of Fiji's intellectual property rights commitments at the WTO (for details see Meads 2008). It can be expected that moves to patent indigenous remedies would also rise if PACER-Plus contains commitments relating to intellectual property rights. This would be likely to undermine efforts to set up a region-wide system aimed at protecting traditional knowledge.

Other things that are important for development in the FICs, like herbicides and pesticides, or new computer hardware and software, may also be more expensive if PACER-Plus contains new rules on intellectual property.

Australia and New Zealand will be keen to include government procurement under the rules of PACER-Plus, as this would allow ANZ firms to bid for major government contracts in the Pacific. Government procurement is the currently favoured terminology for government purchase or acquisition of goods and services. At present, FIC governments may include certain policy or social criteria in the mix when selecting firms to receive government contracts—such as favouring local suppliers that the government wants to support for wider social development purposes (awarding construction contracts to local firms, for example, to expand local employment and to increase local expertise in construction, engineering, architecture etc.) or encouraging purchases from a disadvantaged area within the country.

A reciprocal free trade agreement between the Pacific and Australia and New Zealand would contain dispute settlement mechanisms, allowing a party (or parties) to take compensatory action against another party (or parties) who contravene the terms of any such agreement. All free trade agreements contain State-to-State dispute settlement processes to resolve differences arising in relation to the operation of the agreement. Investor-State dispute settlement mechanisms are an additional process that would allow investors to challenge government actions and sue governments for damages if they felt their investment had been harmed. Australia has signed a number of FTAs that contain Investor-State dispute settlement processes (with Thailand, Chile and Singapore for example) and may seek to include similar arrangements under PACER-Plus. There is a danger that this could allow unaccountable investors to challenge the right of Pacific governments to enact legislation in the public interest. FICs should be extremely wary of any reciprocal free trade agreement with Australia and New Zealand containing Investor-State dispute settlement mechanisms.

A development oriented trade agreement

FICs have stressed that any agreement between the region and Australia and New Zealand (PACER-Plus) must reflect the unique circumstances of the region (small size, great distances between islands and so on) and the limited capacity of many FICs to participate in a whole range of complex negotiations and trade relations at this

time (given ongoing economic partnership agreement (EPA) negotiations and PICTA Trade-in-Services).

PANG (Pacific Network on Globalisation) believes that trade cooperation between Australia and New Zealand and the FICs should be founded on an approach that:

- is based on a principle of non-reciprocity
- reflects the special circumstances of small island developing states
- protects the domestic and regional markets of producers in FIC countries
- allows the maintenance of domestic policy space and supports FICs to pursue their own development strategies.

The starting point for FICs and Australia and New Zealand trade cooperation should be the improvement and strengthening of the existing South Pacific Regional Trade and Economic Co-operation Agreement.

SPARTECA-Plus

The existing regional trade agreement, the South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) has, since it came into effect in January 1981, granted FICs duty free and unrestricted or concessionary access to ANZ markets. Despite this market access, FIC export performance to Australia and New Zealand has remained notably weak—with the development of the garment export industry in Fiji and the export of wiring harnesses (used in car manufacturing) from Samoa as notable exceptions. Clearly, negotiations for a new trade agreement between the FICs and Australia and New Zealand present an opportunity to improve and build on SPARTECA. Such a deal, SPARTECA-Plus, would enable FICs to make better use of their market access to the two neighbouring countries to develop new trading opportunities that promote economic growth in the Pacific islands.

While Australia and New Zealand may seem the natural developed country markets for FICs, in fact the FICs' exports are predominately directed outside of the region (tuna exports to the EU and the US, sugar exports to the EU, bottled water to the US, beef and squash to Japan etc.). Many studies have highlighted the massive trade imbalance between the Islands and their 'big brother' neighbours. Whilst heavily dependent on ANZ imports, FIC exports to Australia and New Zealand are 'narrow and limited to a few key product areas' (Nathan Associates 2007:5).

One way that SPARTECA could be improved to increase Pacific export opportunities to Australia and New Zealand would be through a review of the rules of origin requirements under the agreement. Under SPARTECA at least 50% of the value of any product must be created in the Pacific. A special exception for textiles, clothing and footwear (TCF) allows a lower threshold of 25%, though the criticism has been levelled that the complexity of the TCF scheme has contributed to its ineffectiveness.³

The rules of origin requirements of SPARTECA limit the ability for FICs to export manufactures that are increasingly integrated into global commodity chains, relying on inputs from several countries. Even relatively basic items such as shoes have inputs from multiple countries, with the leather, laces, fabric, eyelets, soles and so on all potentially coming from diverse sources. The outdated SPARTECA rules work against PICs becoming links in those international supply chains, as they reduce PIC exporters' options when sourcing inputs for products destined for Australia and New Zealand. This can result in either less competitive products or no products at all (Oxfam Australia & Oxfam New Zealand 2009).

Another particularly striking weakness of Pacific export trade under SPARTECA is the fact that so few agricultural products are exported to Australia and New Zealand. This is all the more striking given the prevalence of productive agricultural systems in the FICs (for subsistence and cash-income) and the climate 'comparative advantage' of the FICs (for tropical fruits and root crops, for example).

A contributing factor to the relative lack of Pacific agricultural exports is the quarantine regulations and labelling requirements maintained by Australia and New Zealand—which are among the most formidable in the world, and act as a very significant non-tariff barrier to Pacific trade with Australia and New Zealand. A recent report explains:

Australia and New Zealand's quarantine standards are a particular problem for agricultural and wood-based exports as most PICs do not have suitable treatment facilities to ensure products are pest-free, laboratory and research facilities to prove the safety of produce, or sufficient bureaucratic efficiency to fulfill administrative requirements. This sort of

problem results in the nonsensical outcome that it is easier to import bananas into New Zealand from Latin America, half-way round the world, than it is to bring them in from Samoa. (Oxfam Australia & Oxfam New Zealand 2009:23)

Any new SPARTECA-Plus trade agreement should provide resources for FICs to do better at meeting high Australian and New Zealand quarantine standards (through, for example, pre-shipment treatment facilities) and provide additional technical advice for current and potential exporters. Trade facilitation work of this kind is currently being undertaken through a number of programs in the region, such as the EU-funded Facilitating Agricultural Commodity Trade (FACT) program at the Secretariat of the Pacific Community (SPC), the Australian-funded Pacific Horticultural and Agricultural Market Access (PHAMA) program (also at SPC) and the Regional Trade Facilitation Program (funded by Australia and New Zealand as a component of the original PACER agreement). These programs are relatively new in the Pacific, and their efficacy has yet to be fully tested.

SPARTECA-Plus should provide regular and additional resources for trade facilitation programs such as these. If the time is taken to ensure such programs are country-specific, well-targeted, and build on 'best-practice' information from across the region, such programs should help to increase considerably the production and the number of exporters from across the Pacific. Such programs should be designed in coordination with trade facilitation programs funded by other donors (such as the EU) or with Aid for Trade funding provided for through the WTO. Trade facilitation programs that aim to provide assistance for agricultural exporters in the FICs should also aim to improve linkages between agricultural producers and the growing tourism industry in many FICs.

It should be noted that the FICs' inability to take full advantage of SPARTECA has not been simply a matter of lack of export capacity (or technical capacity) in the FICs. Limited capacity for the assessment of Pacific products for quarantine risk analysis (in Australia and New Zealand) also presents a serious problem. Recent experience indicates that potential exporters from the FICs often have to wait considerable lengths of time to have their products approved for ANZ markets. Any SPARTECA-Plus agreement should prioritise the assessment of Pacific products by quarantine agencies in Australia and New Zealand, and additional resources should be allocated to ensure Pacific assessments are expedited.

As part of negotiations for SPARTECA-Plus a review should be undertaken of the impact of Australian and New Zealand non-tariff barriers to trade. Any such review could look at the public health restrictions on imports of commercial quantities of kava to Australia, which have seriously damaged a key export opportunity for countries like Samoa, Tonga, Vanuatu and Fiji.

As well as improving market access, SPARTECA-Plus should also aim to improve the *marketing* of Pacific products (and tourism) in Australia and New Zealand. Value-adding could be achieved by targeting niche products to increasingly discerning consumers in Australia and New Zealand (such as organic or fair trade produce), and utilising the popular image of the Pacific as a broad *brand* for Pacific produce. The phenomenal success of Fiji Water exports, for example, is based largely on the notion that the water comes from the 'exotic and pure' South Pacific islands.

Resources allocated to marketing should also be allocated to market research—potentially through the Pacific Islands Trade and Investment Commission. The Nathan Associates study indicates that it is difficult for producers in the FICs to gauge what products will sell in Australia and New Zealand, and notes that the 'Pacific Islands Trade and Investment Commission (PITIC) assistance has been instrumental to many businesses, but their resources are limited compared to what needs to be provided' (Nathan Associates 2007:11). The PITIC currently has offices in Sydney and Auckland. These two offices should be expanded, in resources and capacity, as part of any SPARTECA-Plus trade agreement.

Whilst important components of any SPARTECA-Plus trade agreement, improvements in trade facilitation, market access and marketing still do not approach the major constraints on development in the Pacific island countries. If Australia and New Zealand are serious about designing a new economic cooperation agreement that helps to meet the considerable development challenges of the Pacific, additional and predictable resources should be allocated for the improvement of infrastructure in the FICs (improving roads, port facilities, and the construction of pre-shipment quarantine infrastructure for example). The design of any final agreement should also consider ways to improve the development of supply for internal markets in the FICs as well—building on existing strengths, like (often well-organised) local food production systems.

Any SPARTECA-Plus style arrangements would differ from a standard free trade deal, as such a deal would be non-reciprocal in nature, maintaining FIC market access to Australia and New Zealand without requiring reckless and potentially dangerous liberalisation in return. A non-reciprocal arrangement acknowledges the vast disparities between the FICs and their developed country neighbours. After all, treating unequal partners in an equal manner is just as unethical as treating equal partners in an unequal manner. A SPARTECA-Plus arrangement offers a much better chance of achieving an economic cooperation agreement genuinely tailored to the development needs of the Pacific.

It should be noted that non-reciprocal trade arrangements continue to be maintained between developed countries and developing countries all around the globe. Closer to home, the US has also received a WTO waiver for duty-free entry to its markets of products from former Trust Territories in the Pacific (the Marshall Islands, the Federated States of Micronesia, the Commonwealth of the Northern Marianas Islands, and Palau). In fact, the US Congress is currently discussing plans to streamline its trade preferences program by *extending* duty-free and quota-free market access to more LDCs. As part of the Tariff Relief Assistance for Developing Economies Act (TRADE Act of 2009), the US Congress is looking to extend the terms of the African growth and Opportunity Act (AGOA) to a number of countries in the Asia/Pacific region—including Kiribati, Tuvalu, Vanuatu, Samoa and Solomon Islands (the LDCs of the FICs).

Other non-reciprocal options

The Australian and New Zealand governments may argue that PACER-Plus must be designed as a reciprocal free trade deal lest it be open for challenge by other WTO members. Indeed the existing SPARTECA could in theory be challenged at the WTO, but not one of the WTO's 153 member countries has shown any interest in doing so.

However, in the extremely unlikely event that a WTO member were to challenge SPARTECA (or a new SPARTECA-Plus) a number of other options for non-reciprocal trading arrangements that would be WTO-compatible are available (see Oxfam Australia & Oxfam New Zealand 2009 for a detailed outline of a number of these options).

The immediate fall-back position would be for Australia and New Zealand to offer Pacific exporters access to ANZ markets under their generalised system of preference (GSP) schemes. These schemes offer low or duty-free access to exports from *all* developing and least developed countries. They are based on the WTO's 'enabling clause' that allows WTO members to 'accord differential and more favourable treatment to developing countries without according such treatment to other contracting parties' (Enabling clause, p 191 para. 1).

The GSP arrangements maintained by Australia and New Zealand could be improved unilaterally to target the FICs better through a GSP+ scheme similar to that maintained by the EU aimed at vulnerable economies. The WTO allows such modifications of GSP schemes 'provided that it is related to objective and internationally accepted differences in circumstances' (World Trade Organisation 2004). Any such GSP+ scheme could be offered to Small Island Developing States (SIDS), as the United Nations recognises all FICs as SIDS. The terms of any such GSP+ scheme could be modified by Australia and New Zealand to match any SPARTECA-Plus arrangement, while the development and trade facilitation components of SPARTECA-Plus could be offered to the FICs exclusively through a regional agreement.

Notes

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1. For an explanation of recent support to agricultural producers in Samoa (and the difficulties in determining the total monetary value of that support) see Malua 2003.
2. There are recent examples of this from within the Pacific. When the Asian Development Bank forced Vanuatu to lower tariffs as part of conditions for a new loan in the late 1990s, for example, the benefits were not passed on to consumers. A report commissioned by the United Nations Development Programme found that one of the 'benefits of trade liberalisation—a fall in retail prices of consumer items—is not evident in Vanuatu'. See Wagle 2007.

3. See speech by Fiji Trade Minister Kaliopate Tavola: 'the SPARTECA-Textile Clothes Footwear (S-TCF) Scheme was designed to reverse Fiji's declining garment export trade with Australia. However, this objective has not been achieved because the complexity of the Scheme had contributed to its ineffectiveness. And all efforts by Fiji to review the Scheme have been in vain because the prevailing view of the Australian TCF direct stakeholders is one of opposition to any review, notwithstanding Canberra's apparent sympathy towards helping Fiji's TCF Industry' (quoted in Oxfam New Zealand & Oxfam Australia 2006.)

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Seasonal labour mobility in the Pacific

Nic Maclellan

As delegates met in Cairo for the International Conference on Population and Development (ICPD) in 1994, the interconnection of population, development and labour migration was a key theme of the summit. Chapter 10 of the ICPD Program of Action focused on international migration (ICPD 2004a). The five-year review of the ICPD Program of Action, held in New York in 1999, highlighted the need for a range of initiatives to ‘intensify efforts to protect the human rights and dignity of migrants irrespective of their legal status’ (quotation from ICPD 2004b).

However, in subsequent years, with its major focus on sexual and reproductive health, the United Nations Population Fund (UNFPA) has not made labour mobility and migrant workers’ rights central to its program priorities and funding. While the ILO (International Labour Organisation) in the Pacific continues to prioritise issues of ‘decent work’ and UNHCR (United Nations High Commission for Refugees) has raised the issue of refugee rights, UNFPA has not extensively resourced work on migration and population.

A second challenge facing any review of the 1994 Cairo program of action is the fundamental shift in labour mobility in the post–Cold War era. Cairo’s chapter on international migration focused on the rights of permanent migrants, refugees and asylum seekers and how the issue of international migration affected population policy. But a central feature of the debate about labour mobility in Oceania (and globally) is the rise of temporary rather than permanent migration, as a structural feature of modern economies (for discussion in the Australian context see Mares 2009). This issue is exacerbated in the era of climate change, where island nations are seeking relocation and migration options for populations affected by global warming (for discussion on the Australian dimensions of climate displacement see Maclellan 2009; on a global scale, see IOM 2009).

For this reason, this paper will focus on the issue of temporary labour migration and the seasonal worker schemes established for Pacific Island Countries (PICs) by the two largest members of the Pacific Islands Forum: New Zealand’s Recognised Seasonal Employer (RSE) program and Australia’s Pacific Seasonal Workers Pilot Scheme (PSWPS).

The question of employment rights and migration is a central feature of Pacific population policy. The demography program of the Secretariat of the Pacific Community (SPC) has highlighted the growing number of young people entering the labour market each year across the PICs. SPC labour force and population data show a youth bulge in most island nations, which means that employment generation will become increasingly urgent in the region in coming decades, as 40 per cent of island populations are currently aged 0–20.¹

In response, there is growing discussion about rural job creation, skills and vocational training and also the potential to address employment through greater international labour mobility.

This paper does not have space to explore the broader question of population, sustainable development and the creation of ‘decent work’ opportunities in the Pacific, but it is worth noting in passing that the 1994 Cairo ICPD summit stressed:

Governments of countries of origin and countries of destination should seek to make the option of remaining in one’s country viable for all people. (ICPD 1994a)

In this light, studies of international labour mobility from the Pacific islands often underestimate the importance of the informal sector, which provides employment to significant sections of the population, especially in the more populous states of Melanesia. The argument that customary land tenures are static, non-adaptive systems that hold back development has been challenged by a range of researchers, who have highlighted the ongoing importance and resilience of community-level agriculture and work practices (see, for instance, Fingleton 2005).

For example, ANU researcher Dr Mike Bourke has shown that in Papua New Guinea, agricultural production of subsistence and locally marketed food and export crops has been on a growth path over recent decades, with almost all the growth occurring on customary land (Bourke & Harwood 2009). In Vanuatu, Port Vila parliamentarian Ralph Regenvanu has documented how chiefs and community leaders are campaigning for greater recognition of the traditional economy in Vanuatu (Regenvanu nd, 2009).

In spite of the resilience of rural production, growing numbers of young workers and families are seeking employment in the formal wage sector, to start small businesses or earn cash for basic livelihoods—improved housing, payment of school fees, purchase of consumer goods and extra material to support agricultural and fisheries production (such as fibres, outboard motor fuel, new gardening tools). For people requiring funding to improve their land or livelihood, the prospect of earning cash quickly by accessing labour markets in urban centres or overseas becomes more attractive. While some people drift to the cities and remain settled in peri-urban squatter settlements, circular migration is also extensive as people move to enclave areas and towns for education, employment and enjoyment before returning to their homes in rural areas or outlying islands.

Historically, workers from Polynesia and Micronesia have migrated to countries of the Pacific Rim and further afield, and this pattern is beginning to have an impact on the countries of Melanesia (for an overview see Connell 2006). Increased labour mobility also comes at a time when donor nations and multilateral agencies are promoting policies of trade liberalisation, privatisation and public sector reform, which is affecting the pattern of employment opportunities in most island nations (Kelsey 2008).

Today, many Pacific workers are international and mobile. Tuvaluan seafarers were captured by Somali pirates off the coast of Africa in 2009 as they staffed the global shipping trade. Since the invasion of Iraq in 2003, thousands of Fijians have worked in the Middle East as security guards, truck drivers and labourers, while Fijian soldiers and police officers serve in peace-keeping operations around the globe. Samoan and Tongan labourers work in factories and building sites in Sydney and Auckland or pick fruit in Australia's horticulture regions (often as 'illegal' or undocumented workers). Meanwhile Indo-Fijian and Tongan computer technicians, nurses, accountants and teachers migrate to get a better life, in the face of political turmoil or limited career opportunities in their homeland.

In the face of this labour mobility, there is a significant academic and policy literature on the role of migration and remittances in Pacific economic development (for a summary see Connell & Brown 2005).

Australia and New Zealand have long taken skilled workers from the Pacific as permanent and temporary migrants, but Pacific Island governments have lobbied for access for unskilled workers to the labour markets of the two largest regional economies. This push has been re-emphasised as Australia and New Zealand have lobbied in recent years for a single regional economic market, through agreements like the 2005 Pacific Plan for Strengthening Regional Integration and Co-operation. Papua New Guinea's former Foreign Minister, Sir Rabbie Namaliu, has stated:

We believe that permitting increased labour mobility should be part of Australia's and New Zealand's commitment to implementing the Pacific Plan. It is one way to demonstrate to our leaders that they are serious about assisting island countries to develop their capacity and their economies.²

For many years, proposals for greater access to the Australian and New Zealand labour markets have been a key demand from Pacific scholars, business interests and governments as Forum member countries moved towards negotiation of regional free trade agreements (for early discussion see Narsey 2004a, 2004b). A 2005 Asian Development Bank and Commonwealth Secretariat report on increased labour mobility in the Pacific stressed the greater benefits of increased movement of unskilled labour for Pacific island economies:

Australia and New Zealand would gain considerably from increasing these quotas [of skilled and unskilled workers from the Pacific] through GATS Mode 4. Although most of the negotiations have focused on the mobility of skilled labour, this paper provides further evidence that the gains to developing economies from Mode 4 are greatest when applied to unskilled labour. (Walmsley, Ahmed & Parsons 2005:28; emphasis added)

The push for seasonal worker programs was boosted in 2006, when the World Bank conducted a major study of temporary labour mobility between the Pacific and Australia, with analysis of demographic pressures in the islands, the role of remittances in development and modelling of the costs of seasonal work programs for employers, workers and government (Luthria et al. 2006). In response, the New Zealand government started the Recognised Seasonal Employer (RSE) program in April 2007 while the Australian government announced the Pacific Seasonal Worker Pilot Scheme (PSWPS) in August 2008.

Seasonal worker schemes are attractive for farmers in developed nations with ageing populations and labour shortages in certain industries or regions. They can guarantee a regular source of labour at harvest time and reduce training costs, in an industry reliant on backpackers, gray nomads and people working cash-in-hand in breach of their tourist or student visas.

Pacific workers are also attracted by Australian and New Zealand wage rates. Much of the demand for employment opportunities is from villagers who are skilled at farming or fishing but lack the trade or professional qualifications needed for urban employment or the chance to migrate to Australia and New Zealand. Legitimate concerns over the costs of temporary worker programs—family separation, potential breaches of labour rights and a lack of housing and welfare support for overseas workers—have often been overshadowed by the demand for access to the Australian and New Zealand labour markets from Pacific workers and governments.

The New Zealand and Pacific Island governments, while acknowledging early glitches in the country's RSE seasonal worker scheme, argue that the program has been a great success. But beyond administrative short-falls, there are structural inequalities that underlie seasonal labour schemes, with an imbalance of power between a local employer and an overseas worker who does not have citizenship rights in the host nation.

For this reason, the growth of temporary labour schemes around the globe is widely debated: the protection of workers' entitlements and health and safety are major concerns in precarious industries like horticulture, agriculture and construction, which often operate in remote and isolated areas with low union coverage, limited government regulation and a highly casualised, mobile workforce (Hugo 2009). Employers are also lobbying for the extension of temporary labour programs to other industry sectors, including tourism, construction and the health and aged-care industry (Callister, Badkar & Williams 2009).

Protecting wages and conditions in horticulture becomes even more significant as increasing costs (related to the supply of water and energy and pressure on farm-gate prices from supermarket chains) reduce margins for growers in a time of economic crisis. The New Zealand experience under RSE alerts us to the fact that a commitment to worker welfare and rights must be central to the design and regulation of seasonal worker schemes. This does not mean that such schemes are not workable or cannot be beneficial for Australia, New Zealand and the Pacific, for workers and employers. But it does place a powerful obligation on all levels of government to ensure that the scheme is designed to minimise the negative side of temporary migration for seasonal work. All participants must work to ensure, among other things, a fair sharing of costs between workers and employers, adequate preparation of workers for life overseas, appropriate pastoral care for workers while in the host country, the provision of suitable housing and the protection of seasonal workers' labour rights.

New Zealand's RSE scheme

In 2006, the then New Zealand Prime Minister Helen Clark announced that New Zealand would introduce a new scheme for temporary seasonal work for the horticulture and viticulture industries. The RSE program began in April 2007, allowing New Zealand employers to recruit overseas workers for seasonal work in horticulture and viticulture. Under RSE, up to 8,000 workers a year can travel to New Zealand from Pacific Island countries or Southeast Asia in order to work for up to seven months in the horticulture industry.

Since then, New Zealand has opened its doors to seasonal workers from neighbouring island nations: thousands of villagers from Samoa, Tonga, Vanuatu, Tuvalu, Kiribati and Solomon Islands have come on temporary visas, to work in vineyards, farms and orchards across the country.³

Under the RSE program New Zealand employers undertake a process of registration and approval before recruitment of temporary overseas workers can commence.⁴

First, an employer applies for registration as a Recognised Seasonal Employer (RSE). To achieve registration, employers must provide evidence of good workplace practices, pledge to pay the 'relevant market rate', ensure workers are 'suitably accommodated', provide for workers' 'pastoral care needs' (including food, shelter and clothing); allow Immigration officials and Labour Inspectors to make site visits and ensure that any recruitment agents do not charge commissions. There are also provisions requiring written policies on HR, health and safety and recruitment and training of New Zealand citizens. RSE status, once an employer gains it, initially lasts for two years, with subsequent renewals for 3-year periods.

Secondly, an RSE employer can seek an 'Agreement to Recruit' (ATR) overseas workers when local employees cannot be found. The ATR allows employers to seek a certain number of workers from a designated country, states how many workers are required in what roles and for how many hours.

Under the ATR, employers have to guarantee to:

- pay half the travel costs for overseas workers flying to and from New Zealand
- provide pay for 240 hours of work (an average of 30 hours per week minimum, or 40 hours for visas of less than 6 weeks)
- provide 'pastoral care' including accommodation, translation, transportation, recreation, religious observance and induction to life in New Zealand
- provide evidence of market rates of pay
- pay costs of removing workers from New Zealand if they overstay (and face possible revocation of their RSE status in some cases).

Thirdly, workers from approved countries apply for a special RSE work visa. RSE applicants from developing countries can obtain a visa for New Zealand under this policy if they meet certain criteria: are aged 18 or over, have a job offer in New Zealand from an RSE-registered employer, have a return air ticket and meet health and character requirements (e.g. HIV-positive people are not eligible for a visa under the RSE policy, and TB testing is required for some countries).

Over the last two years, more than 9,000 workers have entered New Zealand under the scheme (in contrast, only 50 workers from Tonga and six from Vanuatu had arrived under the Australian pilot program by the end of 2009—for reasons discussed below).⁵

Remittances and social costs

For rural villagers from the Pacific, the chance to earn wage rates at Australian or New Zealand levels is a central attraction of the scheme. At a time when wage rates in Melanesia are just hundreds of dollars a year for rural workers, islanders can earn many thousands of dollars in a six-month period, in spite of difficult working conditions and long hours. For example, a New Zealand Department of Labour audit of RSE workers, conducted for the period September 2007 to July 2008, found the net return per worker (after deductions for airfare, food, accommodation etc.) averaged NZ\$5,764.99 (with net totals ranging from NZ\$2,871 to NZ\$11,869). These amounts were earned during an average of 753 hours' work over 17 weeks.⁶

Pacific Island governments are eager to extend the Australian and New Zealand programs to soak up unemployment and increase flows of remittances into rural communities. A growing body of research on remittance spending indicates that the money that workers send home is likely to have beneficial developmental impacts, the major priorities for spending being improved housing, nutrition and children's education. Evidence shows that remittance money spreads well beyond the immediate recipient household, providing economic benefits for the broader community (Brown et al. 2006). With innovative thinking, remittances can also be harnessed for community development programs.

There is evidence that workers of smaller means and fewer employment skills and opportunities from Tonga and Vanuatu are being prioritised for the scheme, with recruitment drawing mainly on people from rural villages. A 2008 study of Tongan RSE workers found that 'workers recruited come from largely agricultural backgrounds and have lower average incomes and schooling levels than Tongans not participating in the program. RSE workers tend to be more rural and less educated than Tongans applying to permanently migrate to New Zealand through the Pacific Access Category' (Gibson, McKenzie & Rohorua 2008).

However, temporary labour migration also has negative social impacts, such as the long-term separation of a parent from a spouse and children and the burden on the elderly who remain in rural villages. There are other significant social costs associated with temporary labour schemes, as detailed in a series of reports on the Canadian and New Zealand experience published through the 'Pacific Labour and Australian Horticulture' project at Swinburne University.⁷ My 2008 report 'Workers for All Seasons?', which looks at the first year of the RSE scheme, shows that a lack of engagement with unions, the community sector and Pacific diaspora communities has led to significant problems (Maclellan 2008).

Self-regulation or enforcement?

The Cairo ICPD conference and subsequent UN human rights summits have recognised that labour rights are a central part of any debate on labour mobility. As the 1994 ICPD meeting noted:

Appropriate steps should be taken to safeguard the wages and working conditions of both migrant and native workers in the affected sectors (ICPD 1994b).

The experience of seasonal workers schemes in New Zealand, Australia and Canada shows that any such scheme must involve more than monitoring of conditions for temporary workers; it must be regulated by government, and there must be a system of sanctions for breaches of those regulations.

However, with the announcement of the Australian pilot in 2008, some farmers argued that they should run the show without government interference. For example, the President of the Cherry Growers Association of Australia said that he did not want unions to be overly involved in monitoring the scheme:

Farmers generally treat their workers well and shouldn't be expected to give the Pacific Islanders any special treatment at the whim of the unions. (Quoted in Macdonald 2008)

In advocating a pilot study on seasonal workers, employer groups like the National Farmers Federation (NFF) argued for a self-regulation model, relying on industry pressure to ensure that overseas workers are not exploited (NFF 2008).

In contrast, Papua New Guinea's agriculture minister John Hickey urged the Rudd Government to protect PNG workers from exploitation by employers:

First we would like to see our workers belong to a trade union in Australia, because they would receive some protection from exploitation if they became trade unionists.⁸

In Australia, trade union leaders stress that any seasonal work scheme must not be used to undercut wages and conditions for Australian workers, and must adhere to core labour conventions and standards.⁹ The International Labour Organisation (ILO) also has a range of conventions covering core labour standards, as well as specific conventions 97 and 143 covering migrant workers, yet these have not been signed and ratified by Australia or by any Pacific Island government.¹⁰

The five-year review of the ICPD program of action in 1999 highlighted the need for an international agreement to protect migrant workers' rights, stating:

Governments in both countries of origin and countries of destination are urged . . . to consider ratifying or acceding to the Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families. (ICPD 1999)

In our region, the Pacific Conference of Churches (PCC) has called on Pacific governments to sign, ratify and implement the provisions of this Migrant Workers Convention. The Convention came into force in July 2003, but thus far has not been signed or ratified by Australia, New Zealand or any other member of the Pacific Islands Forum.

There is great potential for UNFPA Pacific to collaborate with ILO in the region, which is working on programs to promote 'decent work', highlighting fundamental questions of labour rights in the workplace, for local and overseas workers. Trade unions and government agencies must be engaged in supporting the labour rights of foreign workers, who are operating in a totally alien legal and political framework. This also highlights that Pacific labour legislation is often outdated and inadequate to cope with an increasingly globalised work force.

The call for regulation is important, to maintain ongoing support for overseas recruitment from Australian and Pacific unions, through the Australian Council of Trade Unions (ACTU), the New Zealand Council of Trade Unions (NZCTU) and the South Pacific and Oceanic Council of Trade Unions (SPOCTU). In Australia, under the Howard government (1996–2007), the ACTU and key affiliates opposed seasonal work schemes, fearful that the then government's industrial relations laws would lead to a two-tier labour system, with different wages and conditions for Australian and overseas workers. This fear was amplified by the many documented cases of exploitation of overseas workers under s457 visas for temporary skilled labour and industrial relations legislation that limited union access to workplaces.¹¹

Some major unions, such as the Construction, Forestry and Mining Employees Union (CFMEU) continue to oppose the seasonal workers scheme, although the Australian Workers Union (AWU)—which covers many rural workers—has given conditional support as long as it is well regulated. Unions will continue to seek collaboration

with and involvement in any institutions created to regulate the scheme, as noted by AWU Secretary Paul Howes:

We've had massive issues with illegal labour in these industries for several decades now. And what we've seen overseas is that the only way to fix it up is to have a regulated system.¹²

The inspection and monitoring of wages, conditions and pastoral care is central to the RSE scheme, but some unions and support service workers in New Zealand are concerned that departmental staff and financial constraints are limiting this process. For example, in May 2009, Pasifika Service co-ordinator Lapu Oliver stated she was 'really annoyed and disappointed' that no Department of Labour staff would be placed full-time in Marlborough for the harvest season, even though there were 19 RSE employers and more than 1,500 overseas workers in the region (Young 2009).

The management of the Australian pilot program comes under the portfolio of Deputy Prime Minister Julia Gillard as Minister for Education, Employment and Workplace Relations. Placing the scheme under her department rather than the Immigration Department is important in terms of regulating wages, conditions and occupational health and safety. But there is a need for the Department to appoint extra inspectors to monitor implementation of the program, as New Zealand's Department of Labour has done for the RSE scheme.¹³

New Zealand officials state that the number of people breaching their RSE visas is relatively small, given that nearly 9,000 people have participated in the scheme over the first two years. With the opportunity to return again in subsequent years, overstaying has not been a major issue thus far: less than one per cent of RSE workers overstayed their visa between April 2007 and January 2009 (Evaluate Research 2009: 9). The RSE rules place financial obligations on employers to cover the costs for repatriating workers if they overstay their visa or breach local laws.

There have, however, been cases of workers sent home for drinking off-orchard or other offences, which raises serious questions about the fundamental rights and autonomy of Pacific Island workers, given the disparity of power between employer and overseas worker. Workers' lawful leisure time activities should not be subject to the discretion of employers or immigration authorities. Any seasonal workers program should include a standardised disputes procedure, to ensure that workers being sent home are provided natural justice and grievance processes (especially as in other New Zealand migrant worker programs, there are cases where workers have been sent home after they agitated for better conditions¹⁴).

Pacific governments are concerned that examples of overstaying or substance abuse will damage the reputation of the sending countries and promote a backlash that could end opportunities to send seasonal workers. Government officials have lobbied local islander communities in New Zealand to help enforce the rules, and have supported the rapid return of workers who breach visa conditions.

This labour discipline is also maintained by sanctions in the Pacific, with government departments blackballing workers or even whole communities who breach visa or legal requirements. For example, Vanuatu's Commissioner of Labour Lionel Kaluat said no more workers would be recruited from a Pentecost community after one of their young workers was jailed in New Zealand in March 2009 following a drink driving accident that killed a local doctor.¹⁵ The CEO for Cabinet and the Prime Minister's Office in Samoa, Auseugaefa Poloma Komiti, has stated that any workers overstaying their visa will never be accepted for the RSE scheme again, nor will family members of an overstaying worker be allowed to apply for an RSE visa.¹⁶

Transparency over deductions and wage rates

The official Department of Labour evaluation of the first year of RSE noted that the issue of deductions had raised anger and concern amongst Pacific workers, who found they were facing pay deductions they had not been warned about. The evaluation noted: 'Pay deductions impacted negatively on some worker-employer relationships, leading to distrust and disillusionment on the part of some workers' (Evaluate Research 2009).

In spite of this, the New Zealand government amended the scheme in June 2009, when it allowed employers to make deductions to reduce pay rates below the minimum wage of \$12.50 an hour. The Government also announced the requirement that RSE workers will need to hold current health insurance, with Immigration Minister Jonathon Coleman stating: 'This is the best means of ensuring that RSE workers have access to

healthcare while costs to the New Zealand taxpayer are minimised. Employers will be expected to arrange (but not pay for) health insurance that meets the minimum requirements'.¹⁷

NZCTU Vice-President Richard Wagstaff expressed concern that the change will significantly increase exploitation of RSE workers and undermine the credibility of the scheme:

There have been significant examples of unauthorised and unfair deductions from RSE workers' pay even under the existing regulations. Relaxing the minimum wage rule will only result in more blatant exploitation of already vulnerable workers as unscrupulous employers shift costs onto them.¹⁸

In a report for the 2009 WTO review of New Zealand trade policies, the International Trade Union Confederation (ITUC) noted:

Cases of forced labour continue to be reported in horticulture, viticulture and in prostitution. Additional government inspections are required to eliminate such core labour standards violations. Minimum wage protections need to be reinforced in respect of workers on the Recognised Seasonal Employer (RSE) scheme . . . Unions report there have been unauthorised and unfair deductions from some RSE workers' pay under the existing regulations. Amending the minimum wage rule for RSE workers will create a greater risk of exploitation of vulnerable workers who are severely constrained in their working rights while in New Zealand and do not have the right to leave their work situation and remain in New Zealand even if their employer exploits them (ITUC 2009).

Welfare and pastoral care

The experience of the RSE program has highlighted a number of areas where a lack of engagement with unions, the community sector and Pacific diaspora communities has led to significant problems. There is a need for increased effort on labour rights, welfare services and 'pastoral care' for seasonal workers, and to address the shortage of secure and affordable housing in rural and regional areas.

Our study of the New Zealand RSE program in 2007–08 (Maclellan 2008) includes examples of disputes between seasonal workers and employers over:

- poor housing — the New Zealand Department of Labour is investigating reports that a group of over 20 RSE workers from Kiribati were accommodated in one house
- contracts being set by piece rate (e.g. per bin or per tree) at minimum wage rather than 'market rates'
- the contentious issue of deductions — workers may be told the gross rates of pay, but not fully informed of all deductions by employers for housing, transport costs or recouping a share of airfares—exacerbated by the June 2009 decision allowing deductions below the minimum wage rate
- claims by workers that they had been given inaccurate information on housing and other conditions, with workers from Tonga and Kiribati leaving early in spite of loss of wages and inconvenience to the employer.

Following approaches by their partner church the Presbyterian Church of Vanuatu, the Presbyterian Church of Aotearoa-New Zealand has expressed concern about the treatment of Ni-Vanuatu RSE workers in New Zealand. The Moderator of the Presbyterian Church, Reverend Pamela Tankersley, explained in 2008:

We are hearing stories of workers who are cold and hungry. Some arrive to find they will be crammed into houses sleeping many per room, each having an exorbitant amount deducted from their pay for rent and power. Worse some arrive to find no roof over their heads. Te Aka Puaho, the Presbyterian Maori synod, tells of a number of groups of Ni-Vanuatu workers left stranded without accommodation or with cold, leaking caravans provided. They arranged for them all to stay at Ohope Marae over a period of months until adequate housing could be found. In Te Puke, a group of Vanuatu workers were without food and clothes for four weeks and Te Aka Puaho and the local Presbyterian Church responded. In Central Otago a local parish has given much care to Ni-Vanuatu cherry pickers, providing them with warm clothing and Sunday lunches . . .

The assistance our churches give the Ni-Vanuatu workers is freely given and from the heart but we recognise that the Ni-Vanuatu workers should never have been put into a position of need and that the promised support from employers should have been provided. It is only fair and just that these problems are addressed before the next season of Ni-Vanuatu workers arrive.¹⁹

Pre-departure orientation and information

Beyond health and police checks, another crucial step is the pre-departure briefing and orientation of workers. However, the initial announcement of the Australian pilot by Agriculture Minister Tony Burke gave little information about issues like recruitment and pre-departure briefing. This is a major failing, as the official evaluation of the first year of the New Zealand RSE scheme found 'there was widespread agreement amongst employers, Pacific states and New Zealand government officials that the pre-departure training was not as successful as intended (Evaluate Research 2009:5).' The New Zealand experience has shown that the time-consuming and costly work of recruitment and providing information to applicants has a marked impact on the success of the placement of overseas workers.

Most of the sending countries have used their national Labour Ministries to select and screen potential workers in consultation with local island governments, churches and chiefs. The exception is Vanuatu, which has relied on private sector recruiters who contract with New Zealand employers. The regulation and licensing of recruitment agents will be a central feature of ongoing monitoring of workers' rights, to avoid any perception of favouritism, corruption or kickbacks in the recruitment of workers.

The provision of timely and accurate information to aspiring applicants to the program should be a central element of any scheme, to allow overseas workers to make an informed choice as to whether they should apply for the program. Given the inherent imbalance of resources and information between employers and employees, it is vital that this issue be addressed with adequate resourcing. Governments and employers need to translate key information into local languages, develop standard contracts, and assist with provision of information on financial budgeting and transmitting remittances (for example, local banks, credit unions or other financial institutions should develop efficient, low-cost mechanisms to reduce the cost of remitting funds to workers' home countries, which are higher in the Pacific than anywhere else in the world).

Given evidence of alcohol abuse by Pacific workers in New Zealand (including cases already mentioned of Samoan workers sent home and a Ni-Vanuatu worker jailed after a drink driving accident that killed a New Zealand doctor) there is a need for much better pre-departure information on a range of social issues as well as about wages and workplace conditions. For example, workers need practical information and advice on issues such as the weather, appropriate clothing, the quality of housing and social issues like substance abuse, HIV-AIDS and gambling.²⁰

There is also a need for greater involvement of a range of social partners in pre-departure briefings, support and advice programs. Australian policy makers need to investigate innovative solutions to address problems arising from temporary labour programs, such as creating regional stakeholder groups involving employers, unions, local government officials, church and government welfare agencies and relevant representatives from local Pasifika communities.

Employers could also assist with communication between seasonal workers and their families and communities at home, to avoid loneliness and family problems (e.g. by providing telephones and computer terminals with Internet and email access in church or community centres in Australia, while sending governments, NGOs and aid donors could assist with computer training programs and access for families at home).

Co-ordination of support services for seasonal workers in rural areas will be assisted by provision of timely and transparent information about which employers are recruiting Pacific workers, to allow interaction with relevant unions, diaspora communities and social welfare organisations. Relevant government ministries and regional development authorities could assist with initiatives like public websites that list which employers are registered for overseas recruitment and where they are recruiting.

Transitional arrangements for the scheme

The RSE scheme is part of a wider program of industry development, emphasising that seasonal worker schemes are not a one-off panacea for labour supply issues. In December 2005, New Zealand unions, employer groups and government departments signed a 'Medium- to long-term horticulture and viticulture seasonal labour strategy',²¹ which includes five streams: job opportunities for New Zealanders, accessing global labour, improved information on labour markets in the industry sectors, skills development and improving the business practices of contractors.

When the RSE scheme was announced, it was intended to replace existing schemes that allowed New Zealand horticulture and viticulture employers to recruit backpackers and other workers from overseas. But in a major blow to the integrity of the registration system, the government introduced a Transitional RSE (TRSE) scheme to run alongside the RSE scheme proper for two years from 26 November 2007 until late 2009. These changes reduce the extent to which employers have to take responsibility for issues like local recruitment, pastoral care, skills training and workforce development.

At the time the TRSE was announced, New Zealand unions expressed concern that the change was the first foot in the door to water down conditions that have been negotiated in the original RSE package, and that employers would seek further exemptions in coming years. The change of government in November 2008, with the election of the conservative coalition under Prime Minister John Key, has seen further changes to the scheme.

In June 2009, the New Zealand government announced the introduction of a new type of work permit called the Supplementary Seasonal Employment (SSE) permit:

The SSE work permit will provide extra labour at peak harvest times and will be a mechanism for growers to top up their labour pool. Like RSE, SSE will be labour market tested. To apply for a SSE work permit, the workers would need to be already in New Zealand lawfully. SSE permits will be valid for six months and will allow workers to move from one approved SSE employer to another.²²

Early RSE operations indicate that only a few employers see the potential for extra skills training. However, seasonal worker programs must complement, rather than undercut, investment in workforce development and skills training. The recruitment of workers from overseas will be integrated into a long-term industry development only if there is sector-wide planning for labour market testing, skills development, training, and improved wages and conditions in an industry based on precarious and physically challenging work with relatively low pay.

In Australia, there is also a need for federal and state governments to work with Aboriginal and Torres Strait Islander organisations to investigate whether seasonal work programs can also engage indigenous Australians in the measures being proposed for Pacific Islander workers. Public concern about this issue at the time of the August 2008 announcement²³ should be kept in perspective, given that the industry requires thousands of available jobs and the pilot will involve only 800 Pacific workers annually over the next three years (in contrast, New Zealand's RSE pilot has up to 8,000 workers a year).

Community to community links

The benefits of increased remittances should not overshadow the significant social costs of temporary migration for work and the gendered impacts of increased labour mobility on families and communities. Seasonal workers are separated from family for extended periods of time, which can have a serious impact on children's welfare and education and put an extra burden on the elderly left in the village (for analysis of these social issues see Mares & Maclellan 2007; Dennis 2003).

The New Zealand experience suggests that the length of time that workers are away from home is an important issue that needs careful consideration. Workers may wish to stay as long as possible to maximise their earnings but this may not be in the best interests of family at home. The Australian pilot places a time limit of seven months in each 12 month period, but this period must also address issues of lack of work at down times (which means no income but ongoing expenses for housing and food).²⁴

Pacific community leaders are worried about the ways in which increased amounts of migrant work will affect gender roles in rural villages and the potential impact that departing young workers will have on the traditional gendered allocation of jobs. There are also concerns about the ageing of the population in rural areas, as young people migrate to urban centres or overseas, which affects agricultural production and adds burden on already stressed health services.

Henry Vira of the Vanuatu Association of Non-Government Organisations (VANGO) has highlighted concerns that seasonal worker schemes will draw people away from rural centres permanently, estimating that the majority of RSE workers stay in Port Vila after working overseas, rather than returning to their village. This exacerbates existing problems of urban drift:

A lot of communities are very small and as it is at the moment even without that scheme in place when you go around in a lot of rural communities you find old men and old women and children. The big strong people are not there. That adds to the burden of having to manage a family without those strong enough to be around to help out.²⁵

Along with the many cautionary lessons to be drawn from the New Zealand experience to date, there is also evidence of some more creative initiatives that might be adopted to make Australia's pilot seasonal labour scheme a success. These are measures to amplify the *human* side of the scheme, rather than focus only on its *economic* potential.

Labour migration is unlike any other form of cross-border transaction, in that it involves human beings, who bring with them desires, needs, opinions and rights. Rather than being seen as a 'problem' to be managed, this should be embraced. A seasonal labour scheme for Pacific islanders offers more than the potential for employers to find workers and workers to find jobs; it also offers the potential of personal engagement and encounter.

The early evidence from RSE suggests great potential for building and extending people-to-people links between horticulture regions and districts where workers are recruited. Given the regional nature of the sector in Australia, similar potential exists for the horticulture industry to join with local government, churches and community organisations to promote a model of 'sister city' relationships between regional municipalities and localities in the Pacific.

Under this scenario, a particular region (for example, Weather Coast in Solomon Islands) might be twinned with an area in country Victoria (such as the Swan Hill region). In addition to recruiting seasonal workers from a region of Solomon Islands to work in horticulture, associated educational activities could be devised for schools in Swan Hill and community organisations and church groups could take a leading role in organising social events and cultural activities to welcome the workers into the community. Volunteer programs, service clubs (Rotary, Lions etc.) and other NGOs could co-ordinate development activities with targeted communities. Workers would be engaged in some level of formal training—for example in motor mechanics, first aid, chemical safety and handling—to ensure that they go home with useful skills as well as money in their pockets.

Although farmers will prioritise their own business interests, there is potential for linking seasonal work programs to broader development assistance, to maximise the outcomes of increased remittance flows into Pacific villages and rural communities. A key aim of a seasonal work program is to encourage the use of remittances to fund children's education, improve housing or start small businesses. As yet, there have not been comprehensive studies on the earnings and spending patterns of RSE workers, but the limited data available and interviews with workers and recruiters show that there are clear financial benefits for Pacific villagers, even after paying their share of travel and administrative costs.

Community-based organisations in both countries could co-operate to develop ways for remittances to contribute to general development activities, through community trust funds, micro-finance schemes, small business programs, and the education of young women. One significant outcome of New Zealand's RSE program is that some Pacific communities are nominating a number of workers at a time and encouraging them to commit a portion of their wages for community development projects. There are examples, such as the Lapaha Town Council in Tonga and the Lolihor Development Council in Vanuatu, where recruitment of seasonal workers is being co-ordinated by communities as well as individuals and families.²⁶

Australia's Pacific Seasonal Worker Pilot Scheme

In the lead up to the 2008 Forum leaders' meeting in Niue, Australia announced its Pacific Seasonal Worker Pilot Scheme (PSWPS). Prime Minister Kevin Rudd pledged 2,500 visas over three years, for unskilled workers from Papua New Guinea, Tonga, Kiribati and Vanuatu to work in Australia's horticulture industry. Workers can travel to Australia for up to six months, picking fruit in orchards and vineyards. The scheme is designed for employers to get a guaranteed labour force at peak harvest time, while workers earn high wages to send home remittances to family and community.

But the seasonal worker pilot is in trouble. Only 56 workers had arrived in Australia under the scheme by the end of 2009—a sorry tally compared with the success of New Zealand's seasonal work scheme (under which more than 9,000 workers have arrived from six Pacific countries since the RSE program began in April 2007). With New Zealand increasing the annual limit for Pacific seasonal workers from 5,000 to 8,000 workers, the 800 visas on offer each year from Australia look ungenerous.

As the Pacific Islands Forum debates regional labour mobility, the evaluation of this initial pilot will provide evidence for a future decision on continuing the program and whether other sectors—tourism, hospitality,

construction or aged care—should be opened up for workers from the Pacific.

Australia always faced a more difficult challenge than New Zealand in moving to open its labour market to unskilled workers from the region. Australia's horticulture industry, with labour market regulation spread across federal, state and local authorities, is significantly different from New Zealand's.

With a long history of Polynesian migration and experience of regional migration schemes (such as the Pacific Access Category) New Zealand employers were quick to seize the opportunity provided by RSE in early 2007. In contrast, the August 2008 announcement of the Australian pilot left little time for the scheme to be in place before the peak summer harvest season, and came at a time of global recession. One hundred visas were allocated in the first phase of the pilot, but only 50 workers from Tonga and six from Vanuatu arrived in early 2009 to pick fruit and nuts in Victoria and Queensland. Phase Two of the pilot began in July 2009 and will run to June 2012, but after the initial 56 workers, no further workers arrived last year. The lack of demand from Australian employers is causing concern in Canberra, even though the Australian government publicly stresses that jobs for Pacific workers 'will depend on conditions in local labour markets in horticulture growing regions and growers' willingness to trial the pilot'.

The lead agency for the pilot is the Department of Employment, Education and Workplace Relations (DEEWR) under Deputy Prime Minister Julia Gillard, though DEEWR officials work with other departments including Immigration and AusAID. Ms Gillard has stressed:

The scheme was always designed to provide labour where no local labour was available. The timing of the next intake of Pacific seasonal workers is guided by growers and approved employers and the need to identify demand that cannot be met by local labour. As yet no growers have been able to demonstrate unmet demand.²⁷

The Australian government has commissioned a two-part interim evaluation of the pilot scheme, with TNS Social Research studying the domestic impacts of the program and the World Bank evaluating the overseas development outcomes. But as one grower wryly noted: 'Those 50 Tongan workers are the most evaluated fruit pickers I've ever seen!' (personal communication with the author, Mildura, September 2009)

Some Australian authorities blame the global recession, arguing that a high level of Australian and overseas labour is available because of the recent downturn in the mining sector and other industries (although New Zealand has managed to recruit over 4,000 Pacific workers a year under its RSE program, even during the recession). Employment Minister Julia Gillard states:

Currently the horticulture industry is experiencing lower yielding crops due to seasonal influences and this, coupled with an increase in the availability of local labour, has meant the current demand for out-of-area labour has reduced.²⁸

Horticulture Australia Council (HAC), the peak body representing fruit growers, believes that the current availability of labour for Australia's horticulture sector will not last beyond the recession. HAC Chief Executive Officer Kris Newton says:

We genuinely believe this is a temporary situation. For the last 15 years, growers have been more and more desperate to find suitable labour, so the current situation is not normal. In the longer term, if New Zealand can take 10,000 workers, over time we can take at least that many. (Interview with the author, 30 November 2009)

But the current debate over numbers comes at a time of broader structural shifts in the Australian economy. The Pacific seasonal worker pilot began at a time when there has been increasing use of overseas temporary labour in place of permanent migrants. There are more than 320,000 overseas students in Australia who can work up to 20 hours a week in term time and full-time in semester breaks; 130,000 skilled workers under section 457 visas, and more than 190,000 people on visas granted through two working holiday programs (for discussion see Mares 2009).

Most working holiday makers come to Australia for the beach and the nightlife rather than work. But backpackers can extend their stay by working in fruit picking or other sectors in regional Australia. Under the 'Working Holiday' visa program (subclass 417) backpackers who have worked in horticulture or other specified industries for a minimum of three months are eligible to apply for a second visa, granting them a further year's stay in Australia.

A separate 'Work and Holiday' visa program (subclass 462) allows young people from Chile, Indonesia, Malaysia, Thailand, Turkey and the United States to travel and work for up to 12 months in Australia, supplementing the cost of their holiday through casual employment. According to government figures, the number of people granted visas under this 'Work and Holiday' program jumped 87 per cent in 2008–09, to 6,407 visas. Overall, the number of s417 and s462 working holiday visas jumped 23 per cent in 2008–09, from 154,574 to 194,103 (DEEWR 2009).

Beyond these legal schemes, a number of employers in Australia continue to hire overseas workers illegally. Recent media exposés have highlighted the use of undocumented Asian and Pacific workers in the horticulture industry, as growers use low-paid overseas workers to undercut wages and conditions. The pilot comes at a time when there has been a structural shift in the Australian economy, with increasing use of temporary labour in a range of industries (see for example Rule 2009).

The horticulture industry argues that a key reason Australian growers have been reluctant to take on Pacific workers has been the increase in the number of backpackers from Europe, Asia and North America, who have flooded into Australia because of current unemployment and recession in the northern hemisphere. After Britons, South Koreans make up the second largest group in the 'Working Holiday' program with 39,506 visas in 2008–09. Indonesia and Malaysia only joined the 'Work and Holiday' program in 2009, at the same time as the Australian government extended the number of temporary workers who could come from Thailand (DEEWR 2009). Growers suggest that many 'holiday makers' from Asia have come to work rather than party, and this is pricing Pacific seasonal workers out of the market.

Under New Zealand's RSE scheme, growers act as the direct employer of the overseas workers. In Australia, a different model has been adopted, with labour hire companies acting as the employer, and then contracting out workers to the growers at local level. The government has recently called for expressions of interest from other companies to recruit labour from the Pacific, beyond the existing approved labour hire firms: **Abel Solutions, All Recruiting Services and Madec Labour Hire.**

At a time of drought and tight credit, most growers are reluctant to pay extra to get Pacific workers through the labour hire firms. Few employers seem willing to pay the extra premium required to cover the travel and administration costs of bringing in temporary workers from the Pacific, especially from Kiribati. This resistance on costs comes at a time of widespread debate over the industrial award covering the horticulture sector, with growers lobbying government against the need to pay penalty rates on weekends and meet other minimum conditions.

HAC's Kris Newton wonders whether this labour hire system is the best model for recruitment and employment:

We would welcome a more industry-driven model, by industry and for industry, based on local co-operatives or councils of growers, with regional co-ordinators who can develop a local calendar of harvest needs and who know about options for alternative employment. (Interview with the author, 30 November 2009)

Government officials privately state that growers exaggerated the demand for overseas labour, while some growers have been critical of the level of regulation from Canberra, even though officials have reduced limits placed on the scheme in an attempt to draw in new employers (DEEWR has removed the initial restriction that growers from only three regions could recruit under the pilot, so now growers from all over the country with proven demand for labour are eligible to employ Pacific workers).

This shift to industry deregulation creates new problems for unions and community organisations. The pilot has a series of regulations to ensure that core conditions are maintained (on wages, housing and health and safety laws), but losing these could threaten labour rights, given the imbalance between the power of the host employer and the overseas worker.

A further problem is that Australia has diplomatic relations with other countries that would like to join the scheme. Timor-Leste and Solomon Islands lobbied unsuccessfully to be included in the pilot, though Honiara has won the right to join the New Zealand RSE scheme.

By the end of 2009, only three of the four initial countries chosen for the Australian pilot have signed official Memoranda of Understanding (MOU) to get the scheme underway. In November 2008, agreements were quickly

finalised with three of the four countries involved (Kiribati, Tonga and Vanuatu), because these governments were already participating in New Zealand's RSE scheme and had systems in place for the recruitment of workers.

Developing an MOU with Papua New Guinea has taken much longer. Australia's northern neighbour has a larger range of players at national and provincial levels that must be consulted and involved, and there are problems balancing efficiency and equity in recruitment in a country of 6.7 million people. The debate about labour mobility with Papua New Guinea is also affected by proposals for major resource projects, including pipelines and LNG processing facilities for PNG's massive gas reserves.

The pilot scheme also has some critics in Papua New Guinea, who argue it has little to contribute to PNG development. In early 2009, Morobe Provincial Governor Luther Wenge encouraged PNG workers to stay at home and develop their skills, arguing: 'The seasonal workers scheme is a stupid idea and you are making yourself look inferior.'

In spite of this, a draft MOU with Papua New Guinea has been finalised and is currently being considered by the PNG government.

Labour mobility and PACER-Plus

The debate about increased opportunities for temporary workers must be seen in a broader context of regional labour mobility, trade negotiations and economic integration.

In the 1880s, there was debate about whether New Zealand and New Guinea should be incorporated into the Australian Federation—a proposal scuttled by advocates of the White Australia Policy. Today, the announcement of the pilot seasonal worker program comes at a time when Australia and New Zealand are debating greater regional economic integration. In 1983, Australia and New Zealand joined together in Closer Economic Relations (CER), with two-way trade now worth \$21.5 billion. In New Zealand, en route to the 2008 Forum leaders meeting in Niue, Kevin Rudd stated:

I want to see us working more closely together bilaterally, driving towards the single economic market. (Rudd 2008)

The two major Pacific powers are now debating how to extend CER to the wider Pacific region. The Pacific Agreement on Closer Economic Relations (PACER), signed by most Forum member countries in 2001, is now being extended into a regional free trade agreement, dubbed PACER-Plus. After Forum leaders gave the go-ahead for negotiations at the August 2009 Pacific Islands Forum meeting in Cairns, trade ministers from around the Pacific met in Brisbane in October 2009 to map out a timetable for these negotiations. Australia and New Zealand have been pushing for a rapid progression of negotiations, in spite of resistance by some Pacific governments and community groups, who are wary of the social and economic impacts of full regional integration.

In an interview, a spokesperson for Australia's Deputy Prime Minister Julia Gillard notes:

At a meeting of Pacific Islands Forum Trade Ministers, held in October 2009, there was agreement that regional labour mobility would be one of the priority issues for the negotiations. However, detailed discussions on possible PACER-Plus provisions have yet to commence. (Statement to the author from the office of the Deputy Prime Minister Julia Gillard 8 December 2009)

One reason for the slow start to the Australian seasonal workers pilot is that the issue of labour mobility is entangled with the negotiation of PACER-Plus. Island governments insist that increased labour mobility is integral to any trade deal. As well as existing opportunities for skilled professionals and trades people, Pacific nations want greater access to the Australian labour market for workers whose main skill is farming or fishing.

Under PICTA, Forum Islands countries are proposing a two-tier labour mobility program within the islands region. With 'Temporary Movement of Natural Persons' a component of regional trade in services under PICTA, Islands governments are studying proposals for free movement of professional workers and quotas for unskilled workers.

Island officials insist that increased labour mobility is integral to any trade deal. But there is a central tension in expectations between different players in Australia and the islands. Australia's Employment Minister Julia Gillard has stressed that 'labour mobility programs are demand driven and complement the conditions in the Australian labour market.' If programs for unskilled workers from the Pacific are 'demand driven', greater access will be provided only when there are shortages of Australian workers in key industries. This principle clashes with the expectation in the Pacific that there should be quotas in any agreement to lock in numbers of workers to be recruited, so that labour mobility is not restricted in times of recession or political dispute. PACER-Plus must be WTO compatible, so concessions granted in the regional FTA may have implications for other trade agreements (no small matter, as Australia is currently negotiating a Free Trade Agreement with China, with Beijing seeking greater labour market access as part of the deal).

Remittances from overseas workers are already a crucial source of revenue for many island states (for example, Fiji earns more from remittances than either sugar or garment exports, and until the recent recession, remittances made up a third of Tonga's GDP). Under a more liberalised trade and investment regime, the importance of remittances will grow. Island governments hope offshore workers' wages will help to compensate for revenue lost as import tariffs are removed under the PACER-Plus agreement and overseas employment can replace jobs shed by industries that are currently subsidised or protected. Pacific non-government organisations (NGOs) argue that the seasonal worker program in Australia should be developed as an element of migration and development assistance policy, rather than used as a trading chip in the proposed negotiations for a regional free trade agreement.

A statement to Forum leaders by key regional NGOs—including the Pacific Conference of Churches (PCC), the Pacific Islands Association of Non-Government Organisations (PIANGO), the South Pacific and Oceanic Council of Trade Unions (SPOCTU) and the Pacific Network on Globalisation (PANG)—states that seasonal works schemes: 'should not be used as bargaining chips in negotiations to create pressure for trade liberalisation in Pacific Islands countries. Labour mobility schemes, such as New Zealand's pilot Recognised Seasonal Employer (RSE) scheme (or any similar scheme in Australia), must be completely separated from PACER-Plus negotiations (PCSO 2008).'

Notes

- 1 Population data and demographic trends for island nations are detailed by the Secretariat of the Pacific Community (SPC) Demography / Population program: <http://www.spc.int/demog/>. Labour force data are available from the SPC PRISM project at http://www.spc.int/prism/social/lab_force.html.
- 2 Quoted in *Australian Financial Review*, 26 October 2005, p 8.
- 3 In spite of the stated focus on the Pacific, over 20 per cent of RSE workers came from Indonesia, Thailand, Malaysia and other Southeast Asian countries in the program's first year. This undermines one of the principal justifications for the scheme—that it offers opportunities for development and employment in Pacific Island nations with restricted economic options.
- 4 Full details of the RSE program and application forms can be found at: <http://www.immigration.govt.nz/migrant/stream/work/hortandvit/rse/>.
- 5 By April 2008, after a year of operations, 4,070 workers from the Pacific and Southeast Asia had RSE visa applications approved. For the year May 2008–April 2009, nearly 5,000 more RSE workers were employed (including 2,400 from Vanuatu, 1,200 from Tonga, 1,100 from Samoa and the remainder from Solomon Islands, Kiribati and Tuvalu).
- 6 Department of Labour, Recognised Seasonal Employer (RSE) policy: stakeholder update, 28 August 2008. The New Zealand government introduced a new unique tax code for RSE workers in April 2009, which will improve monitoring of wage data.
- 7 The author has been a research associate for the project at the Institute for Social Research (ISR) at Swinburne University of Technology in Melbourne, Australia. Our original 2006 study was funded by the Australian Research Council with an industry linkage grant, with industry partners Oxfam Australia and two local government authorities—the Sunraysia Mallee Economic Development Board (Mildura) and the Economic Development Unit of the Swan Hill Rural City Council. Copies of project working papers can be found on the ISR website at <http://www.sisr.net/cag/projects/pacific.htm>.

- 8 'PNG gives cautious welcome to seasonal workers scheme', *Pacific Beat*, Radio Australia, 20 August 2008. <http://www.abc.net.au/ra/programguide/stories/200808/s2341516.htm>.
- 9 Interview with Rajeshwar Singh, President, South Pacific Council of Trade Unions (SPOCTU), Suva, June 2005. Interview with ACTU International officer Alison Tate, Melbourne, September 2009.
- 10 ILO C.97 *Migration for Employment Convention (Revised)*, 1949 and ILO C.143 *Migrant Workers (Supplementary Provisions) Convention*, 1975.
- 11 For examples of industrial accidents, wage rip-offs and illegal deductions under subsection 457 visas, see AMWU, *Temporary skilled migration—a new form of indentured servitude* (AMWU, Sydney, 2006).
- 12 Quoted on 'Pacific Island guest worker scheme sparks union backlash', *7.30 Report*, Australian Broadcasting Corporation, 14 August 2008.
- 13 As at May 2009, there were five DoL inspectors, covering the following regions: Christchurch / Central Otago; Marlborough / Nelson; Hawkes Bay: Gisborne; Tauranga / Waikato; Whangerei / Northland.
- 14 In 2007 work permits were revoked for eight Thai workers in Blenheim vineyards after they spoke out about their employer's work practices. See 'Bad employment practices expose wine industry—CTU', *The Unionist*, No.83, 6 July 2007.
- 15 'Community to pay for one man's sin', *Vanuatu Daily Post*, 13 May 2009.
- 16 'Samoa leader angry at worker breaking conditions of seasonal employment scheme', *Radio New Zealand International*, 19 April 2007; 'Samoa warns anyone overstaying in New Zealand puts relatives' visas at risk', *Radio New Zealand International*, 12 August 2007.
- 17 Minister for Immigration, Dr Jonathan Coleman, Statement to Parliament, Wellington, 10 June 2009 <http://www.beehive.govt.nz/speech/summerfruit+nz>.
- 18 'Open season for exploitation of workers', NZCTU media release, 4 June 2009.
- 19 'Church supporting RSE Ni-Vanuatu workers, Dept of Labour to investigate contractor', Presbyterian Church of Aotearoa New Zealand, media release, 30 July 2008.
- 20 The SPC's Regional Maritime Program has developed social responsibility modules for training seafarers. It would be worth further study to see whether elements of these pre-departure training programs could be adapted for use in pilot programs for seasonal agricultural workers.
- 21 Copies of the strategy can be found at: http://www.hortnz.co.nz/communications/pdfs/Seasonal_Labour_Strategy.pdf.
- 22 Minister for Immigration Dr Jonathan Coleman, Statement to Parliament, Wellington, 10 June 2009 <http://www.beehive.govt.nz/speech/summerfruit+nz>.
- 23 'Calls for Pacific worker scheme to include Aborigines', *ABC Online*, 19 August 2008; Sarah Smiles, 'Aborigines need "cuts to welfare"', *The Age*, 23 August 2008; Patricia Karvelas and Stuart Rintoul: 'Aboriginal workers "can't be found"', *The Australian*, 20 August 2008.
- 24 Chapter 4 of the 2006 World Bank study (Luthria et al. 2006) includes modelling of the balance between length of employment, financial benefits and administrative costs for workers and employers (visas, health checks, airfares etc.).
- 25 'RSE scheme may contribute to urban drift in Pacific', *Radio New Zealand International*, 26 June 2009.
- 26 For case studies on these two communities, see Maclellan (2008). See also an interesting study of community organisation of Tannese workers from Vanuatu, Connell and Hammond (2009).
- 27 Statement to the author from the office of the Deputy Prime Minister Julia Gillard, 8 December 2009.
- 28 *ibid.*

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Labour mobility and Pacific Islands economic integration

Biman Prasad, Rup Singh and Ganesh Chand

Forum Island Countries (FICs) face a number of economic development challenges in the current global trading environment and in the context of the current global economic crisis. For FICs to have any prospect of increasing their exports under increasingly competitive regional and global trade regimes, will entail facing special challenges that will include undertaking economic reforms to realign national macroeconomic policies to support market-led growth opportunities and to develop appropriate and quality institutions to support capacity for developing export competitiveness.

The ultimate objective of many of these policies is to achieve acceptable levels of economic growth that can provide decent living standards for the people in the FICs. The employment opportunities arising from sustainable growth are the key to reducing poverty in these countries.

Labour markets in the FICs are characterised by high levels of unemployment and the inability of the FIC economies to generate levels of employment commensurate with the numbers of new entrants to the labour force each year. In the majority of the FICs, most of the formal sector employment is provided by the public sector even though in the larger FICs there is a reasonable level of formal employment in the private sector. Another characteristic is the rising level of youth unemployment. FICs generally have large youth populations and employment opportunities for many of these young people are limited. In Fiji, Papua New Guinea, Solomon Islands and Vanuatu the problem of youth unemployment is acute. In the case of Fiji about 13,000 to 15,000 school leavers each year enter the labour market and because formal sector employment is limited, many of them have no choice but to join the ranks of those in the informal sector. This situation has been made worse as a result of the 2006 coup and the global economic crisis.

High unemployment in the region, a serious issue, provides the context in which the possibilities of labour mobility are considered important enough to be central to negotiations on trade in services. This study therefore suggests a framework for further analysis of the costs and benefits of labour mobility under such trade agreements and discusses extensively the different types of costs and benefits that need careful attention within consideration of the issue of labour mobility under the various agreements.

This paper follows on from the World Bank study (Luthria et al. 2006) which argues that there is a need for economic integration in the FICs, largely because of the substantial structural problems that impede full realisation of these countries' potential, a line of argument that Tabaiwalu et al. (2009) also support. It emphasises that the free flow of labour, particularly in the unskilled sectors like agriculture, will be beneficial because it has few negative implications for trade volumes. Quoting Walmsley (2005), the Bank argues that the results of modelling unskilled labour market movement will raise welfare for the FICs as well as Australia and New Zealand. However, it warns that these movements require further policy attention because over the longer term their continuation in large volumes will not be acceptable in destination countries.

At the national level, a number of policy guidelines were noted that could improve the contribution of labour to economic development. At the regional level, Ministers reiterated the potential benefits of labour mobility between Forum members, whilst recognising the importance of domestic policies in promoting sustainable growth, and they have requested an update from further examination of the costs and benefits of the temporary movement of labour under various regional trade agreements.

Temporary labour movement is seen as a movement of labour across national borders that involves the following elements: out-movement of labour from one country for a period that is not life-long; and in-movement of labour from another country for a period that is not life-long.

For the purpose of this paper, temporary movement is defined as a movement that does not involve any change in the citizenship status of the worker. In this sense, the movement retains the worker's political rights in the source country, while granting limited constitutional rights to him/her in the host country. One example of this is the right to participate in local or national politics. Temporary migrants cannot participate directly in national policy making in their home country through established political institutions like the legislature. They could, however, exercise this right in the country of their origin. This follows that the WTO GATS Mode 4 type of definition applies to temporary movement of labour in this report.

Evaluation of costs and benefits is typically done through cost–benefit analysis (CBA), which is a tool for analysis that is specific to one particular issue. In this sense, a CBA for temporary labour migration would be relevant for the entire Pacific region if the region were treated as one entity. From this point of view, the CBA would be one that would examine the net benefits of temporary labour movement between the FICs as a group, and to countries outside the FICs. However, to date, there are no modalities of labour movement developed in any of the trade agreements, even though the EPAs (Economic Partnership Agreement) are still being negotiated. Without any details of the agreements being chalked, a CBA would remain speculative and incomplete. In any case, even if the details were agreed to, individual CBAs would be required for each of the 14 FICs in order to develop country specific policies. Nonetheless, whatever is the case, to do a CBA, one needs to develop a list of items that ought to be included in the stream of costs and benefits for the sending country. Similar lists need to be developed for the receiving country.

This study provides a list of items that would be considered in any CBA of temporary labour movement of unskilled and semi-skilled labour. On the basis of data available through published sources, the study also makes projections on the labour market supply and demand conditions, and some estimates of potential benefits of temporary labour movement using partial indicators given the dearth of solid data for more robust analysis.

Labour market status in the Pacific region

As noted in the FEMM (2006) action plan, labour markets in FICs face several structural problems, which have been aggravated by the FIC governments' general neglect of appropriate policy responses. The basic characteristics of labour markets, some of which are noted by the 2006 FEMM and Prasad (2007) are:

- a) A large proportion of the rural labour force seeks employment in the formal sector although lacking formal education and training. This rural–urban movement has not only increased the gap between productive jobs sought and those available but has also exacerbated several urban social problems.
- b) The consistently large dropout from schools of young people without appropriate employable skills has led to high rates of youth unemployment. This has been compounded by the slow pace of growth and investment in the FICs.
- c) There exists a huge mis-match of skills, which is largely due to the net out-migration because the domestic economies fail to produce (and retain) adequate replacement workers.
- d) There is a lack of gender balance in employment on account of the relative lack of education and empowerment of women.
- e) Attracting expertise from abroad is difficult due to the wage differentials as well as a wage premium that is required to account for social and political factors .
- f) Often the workers from the FICs are, effectively, less mobile, because of institutional and legal constraints placed by labour recipient countries.
- g) Labour market reforms proceed at but a slow pace as a result of generally poor governance, lack of capacity to design and implement effective policies and the unavailability of consistent labour market data, which has rendered the conduct of research more difficult.

Labour market indicators

The ILO's key labour market indicators for the FICs are summarised below. These indicators provide a snapshot of the labour market developments in the region and have been updated using various recent studies on the status of labour markets in the FICs.

- a) Labour force participation rates differ in the FICs from as low as 21% in Tuvalu to around 43% in the RMI (Republic of the Marshall Islands) and Tonga and over 60% in Solomon Islands, Fiji and Papua New Guinea.
- b) Generally, the employment-to-population ratios are low in all the FICs, particularly in Papua New Guinea and Solomon Islands.
- c) It is hard to get exact data on the status of employment, but for most of the FIC populations it is predominantly in the informal sector. Private sector employment in general is stagnant in many FICs but there are signs of increasing employment in some sectors (for example, tourism in Fiji in normal times and the Cook Islands).
- d) A very high proportion of population—averaging around 80% in Papua New Guinea, Solomon Islands, Kiribati, Tuvalu, Vanuatu and Samoa—are in the informal economy. In Fiji, it is around 60%.

- e) Urban unemployment—which is reported to be around 40% in Papua New Guinea, Solomon Islands and Vanuatu—is a major challenge in the FICs. In Samoa, Tonga, Fiji and RMI, urban unemployment estimates are around 30%.
- f) Although a large number of school leavers enter the labour market each year, in Fiji and Papua New Guinea, graduate unemployment is rising.
- g) Women, bearing the burdens of lower educational attainments and customary obligations, are also unemployed in mostly remote centres of the FICs. For the most part these trends are notable in the Melanesian islands, but these are not different from those noted generally for developing countries. Reddy and Reddy (2006) provide some justifications and empirical evidence from Fiji, claiming that gender and education are two of the bases for income disparity amongst males and females.
- h) The integrity of published data is poor for indicators like wages and earnings for most of the FICs. However, later in this paper we utilise what data are available to draw some tentative conclusions. Public service jobs are well paid in a number of FICs although professional jobs in finance and banking, mining, agriculture and technical areas also earn high wages. There is little data on productivity and unit labour costs but it is generally believed that public sector jobs have low productivity and high unit labour costs.
- i) There are also increasing numbers living in poverty due to unemployment, underemployment, low productivity and low wages from full-time jobs.

Supply of labour

Most of the FICs have deficit supply of skilled but abundant supply of unskilled and semi-skilled labour. Some of the factors affecting supply of labour in the FICs are:

- a) Lack of employment prospects in the informal sector and the increasing supply of semi-skilled and unskilled labour in most FICs' urban centres. The Pacific Urban Agenda, revised in April 2007, recognises this phenomenon as a major challenge for the region. More so, continued international migration to New Zealand, Australia, Canada and the USA has reduced the general pool of skilled workers in the region. However, in some FICs, for example, Kiribati and Tuvalu, the local population is trained for working overseas, especially on foreign ocean-going vessels.
- b) Population growth in Melanesian and Micronesian states is high. As such, they have large pools of workers. In contrast, growth in population is much lower in the Polynesian economies, partly because of the high migration rates of citizens.
- c) Country reports from RMI and Kiribati indicate that students find it hard to grasp the basic academic skills. This has implications for productivity and absorption in the labour force.
- d) Relatively low wage rates, lack of training opportunities and rigid labour laws are also factors affecting labour supply.
- e) Pandemic diseases, such as AIDS in Papua New Guinea, and increasing numbers of reported cases in other FICs, have implications for the potential supply of labour.
- f) With strengthening and development of national and regional training institutions, the supply of fresh graduates is rising. However, these graduates are also the first to migrate because of political uncertainties, lack of security for land and properties, perceived higher incomes and standards of living abroad, and changes in expectations over what constitutes a satisfactory standard of living, a desirable occupation and a suitable mix of accessible services and amenities.

Demand for labour

In light of low economic growth scenarios in many of the FICs, in-country labour demand is low. Further, political and economic uncertainty and negative perceptions, in some of the large island states has led to a further stagnation in the demand for labour. Some of the characteristics of demand for labour in FICs are:

- a) In most of the FICs, the major employer is the public sector, which accounts for around 68% of all employment in Kiribati, 66% in Tuvalu, 40% in Fiji, 48% in Papua New Guinea, and 24% in Samoa. The public sector, however, is not expanding, largely on account of fiscal pressures as well as the public sector reform process adopted by many FICs.
- b) There is, however, relatively high demand for local semi-skilled workers in Australia and New Zealand, particularly in horticulture industries. Skilled and educated workers are perceived to be easily absorbed into these countries but many skilled workers (such as those from Fiji in the 1970s and 1980s) are attracted to such industries by the positive wage differentials.

- c) Differential sectoral growth creates differential demand for labour. Cook Islands, for example, recruits tourism industry workers from Fiji, while one finds Cook Island workers working in New Zealand. Construction workers from Fiji work in Tuvalu, while Tuvaluan workers are found working on foreign ships. Fiji's soldiers work in the Middle East, while Solomon Island has defence and security personnel from Australia working to maintain peace. Fiji imports accountants, IT personnel and doctors from India and Sri Lanka, while exporting accountants and IT personnel to other countries in the region. However, these emerging trends are still not widespread across the region.
- d) The failure to make good progress with public sector and labour market reforms has also inherently impeded optimal opportunities for demand.

Trends and projections of labour demand and supply

The labour force in the FICs is very young and generally unskilled—on average 45% of the population falls into the 15–24 years age category. A majority of these are unemployed or subsist mainly in the subsistence sector. The labour force growth rate can be proxied by the trends in the natural rate of population growth. Data obtained from the World Bank's World Development Indicators (2004) highlight that in the FICs the net natural growth rates of labour force (i.e. the difference between the birth and death rates) seems to have stabilised at around 20–30 persons per 1000 people.

These trends can be used to analyse the expected growth rates of the labour force. It should, however, be noted that the net natural population growth rate depicts the growth in population better than that of the labour force. This is because of the considerable time involved in the natural transfer of a newborn individual to the labour force. For our purpose, this means that each year, only a certain proportion of the net increase would actually add to the labour force. Likewise, a certain proportion exits the labour force as workers keep on retiring. Taking the estimates by Booth et al. (2006) for 2004 as the base, we apply the perpetual method with a net adjustment to the stock of labour of around 7% each year. On this basis, we project the supply of labour from 2004 to 2015. The projections show an average annual increase for each country, shown as average expected growth in labour force (Table 1).

We use the average growth rate of output for each country from 2001 to 2005 as the basis for the expected demand for labour. Assuming that the stock of capital grows by the average savings rate less depreciation and inflation rates, we project the required growth rates of the labour force using the standard growth accounting procedure with three different measures of the capital share (0.30, 0.35 and 0.40). Such a useful framework of analysis is also suggested by Tabaiwalu et.al. (2009) although they do not go into the technical details to compute numbers as given in Table 1.

We then compute the average required growth rates of labour based on these three values of the share of profits. The expected growth in labour supply is compared with the projected demand for labour based on these computations. The results indicate that there exists excess supply of labour in all the countries. For Cook Islands and RMI, calculations could not be done on account of lack of information on average expected growth in the labour force. The results support the status of labour markets in the FICs.

Supply and demand for skilled labour, however, are not stagnant in the long term. However, we are aware that the supply of skilled labour may be affected by net migration defined as emigrants less those leaving the PICs on a permanent basis. Consistent data are available only for Fiji, the Cook Islands, Samoa and Tonga from the ADB website and these indicate that from the mid-1990s, on average, net migration has stabilised to around 10 per 1000 people. Taking this average and adjusting for the fact that most migration is of skilled labour, the status of general pool of labour in the FICs can be re-computed and preliminary results indicate that Fiji, Samoa and Tonga, in particular, may face a shortage of skilled labour supply if migration continues the trend. Further simulations of our model indicate that for Papua New Guinea and Solomon Islands, there will be a shortage of labour only if their outputs grow to around 4% per annum. This is highly unlikely due to growth rates of far less than 4% over the past 35 years. If Vanuatu grows by the developing countries' average rate of 2.5%, there will still be surplus labour in Vanuatu (Table 2).

Table 1 Status of labour market in FICs

Countries	Working age pop	Avg. expected growth in labour force		Growth of output	Growth of capital	Required growth of labour force with alternative capital share (%)				Labour Status
	(000's)	(000's)	(%)	(%)	(%)	0.30	0.35	0.40	Avg.	
Cook Islands	7276	Na	na	4.00	9.00	0.14	-0.85	-2.00	-0.35	Na
Fiji Islands	487450	3943	1.00	2.63	4.40	0.74	0.26	-0.30	0.50	Surplus
FSM	61786	396	1.00	0.85	6.40	-1.89	-2.60	-3.42	-2.24	Surplus
Marshall Is.	29614	Na	na	1.64	4.40	-0.25	-0.73	-1.29	-0.49	Na
PNG	3320217	123925	3.20	2.71	6.70	-0.16	-0.90	-1.76	-0.53	Surplus
Samoa	91131	4214	3.80	4.07	4.50	2.14	1.65	1.07	1.89	Surplus
Solomon Is.	239362	12642	3.00	1.72	4.70	-0.29	-0.81	-1.41	-0.55	Surplus
Tonga	51824	2062	3.00	2.49	2.70	1.33	1.04	0.69	1.18	Surplus
Vanuatu	110976	4442	3.40	-1.58	6.70	-4.45	-5.19	-6.05	-4.82	Surplus
Kiribati	49520	1935	3.30	0.50	3.20	-0.87	-1.22	-1.63	-1.05	Surplus

Source: Authors' computations based on data from The World Development Data (2004) and Booth et al. (2006)

Table 2 Expected status of labour market in FICs

Countries	Working age pop	Avg. expected growth in labour force	Growth of output	Growth of capital	Working age pop	Required growth of labor force with alternative capital share (%)				Labour Status
	(000's)	(000's)	(%)	(%)	(%)	0.30	0.35	0.40	Avg.	
Cook Islands	7130	na	na	4.00	9.00	1.86	1.31	0.67	1.58	Na
Fiji Islands	477701	2927	0.60	2.63	4.40	1.87	1.68	1.45	1.77	Shortage
FSM	60550	294	0.50	0.85	6.40	-1.53	-2.14	-2.85	-1.83	Surplus
Marshall Is.	29022	na	na	1.64	4.40	0.46	0.15	-0.20	0.31	Na
PNG	3253813	92005	2.50	2.71	6.70	1.00	0.56	0.05	0.78	Surplus
Samoa	89308	3129	3.00	4.07	4.50	3.89	3.84	3.78	3.86	Shortage
Solomon Is.	234575	9385	3.40	1.72	4.70	0.44	0.12	-0.27	0.28	Surplus
Tonga	50788	1530	2.60	2.49	2.70	2.40	2.38	2.35	2.39	OK
Vanuatu	108756	3729	3.00	-1.58	6.70	-5.13	-6.04	-7.10	-5.58	Surplus
Kiribati	48530	1439	3.30	0.50	3.20	-0.66	-0.95	-1.30	-0.81	Surplus

Source: Authors' computations based on data from The World Development Data (2004) and Booth et al. (2006)

Nonetheless, temporary movement of labour will have insignificant effects on the supply of workers in the FICs. Firstly, immigration rules state a maximum period of stay and secondly, there is a surplus of unskilled and unemployed workers available in FICs. Opening up borders to temporary labour movement seems to be justified because the skills shortages can be met by inter-regional labour transfer creating net benefits via increased earnings possibilities. However, further work needs to be carried out on the detailed status of demand and supply conditions for each country and for specific industries. For this, more disaggregated data are necessary than are presently publicly available.

The free flow of workers will have implications on wage determination and will require labour market restructuring, which the FICs have been undertaking, to varying degrees because of varying social, economic, political and legislative arrangements in each country. In terms of legislation, the Cook Islands, Fiji, Kiribati, Papua New Guinea, Solomon Islands, Tuvalu, Vanuatu, and Samoa have specific employment legislation (Employment Act) regulating the general terms and conditions of employment. However, the FSM, Niue and Palau have either their constitution or other laws overlapping to regulate employment and wages. The RMI does not have specific employment legislation and Tonga has only recently drafted its Employment Act. Except in the smaller FICs (Cook Islands, FSM, RMI and Nauru) other FICs have trade union legislation.

In the smaller island states there are neither wage setting nor dispute settlement mechanisms except for some administrative polices. OHS Acts are present in Fiji, Papua New Guinea, Solomon Islands, Samoa and Vanuatu, but Employment Acts and other laws regulate OHS in Kiribati and Tuvalu. Superannuation and pension laws are not well developed in FSM, Palau, RMI, Cook Islands, Nauru and Tuvalu. Apart from Tonga, public service employment in the other FICs is governed by their respective Public Service Acts, the Constitution or their respective Employment Acts. Policies regulate workers' compensation in FSM and Fiji. In Palau and RMI, there are second country laws that regulate workers' compensation. There are no such laws in Tonga. Other FICs have workmen's compensation laws. Cook Islands, Palau, Papua New Guinea and Samoa have legislation on expatriate/foreign workers. Foreign labour and immigration regulations exist in FSM, Fiji, Solomon Islands and Vanuatu, but no expatriate laws in Nauru, Niue, Tuvalu and RMI. Tonga has an administrative policy to deal with foreign workers.

Provisions of labour movement under the current trade agreements

FICs have in recent years indicated their interest in two trade agreements: the Pacific Island Countries Trade Agreement (PICTA) and the Melanesian Spearhead Group (MSG) Trade Agreement (see details in Appendix 1). In addition, there are two closer economic agreements that may address the movement of labour, i.e. the Economic Partnership Agreement (EPA) and the Pacific Agreement on Closer Economic Relations (PACER). In each of these, the provision for trade in services, which includes movement of labour, varies. Neither PACER nor PICTA specifically provides for labour movement. The specific references in the agreement are only with respect to trade in goods. It is understood that parties have agreed to expand PICTA to a broad range of services. However, the provisions can be derived from the wordings and intentions of the document. The objectives of these as stated are to establish the framework for the gradual 'trade and economic integration' of the FICs in a way that is fully supportive of sustainable development of the region. The eventual aim is to establish a 'single regional market'—one that would include a single regional labour market.

The obvious implication of a single regional labour market is to eliminate all barriers to free and non-discriminatory flow of labour (also see Tabaiwalu et al. 2009). The specific processes that will lead to such a market, however, are yet to be developed. In PICTA, Article 15 allows for trade in services, but this is restricted to government procurement of services. However, it is obvious that the absence of any specifics in both the agreements implies that they will have to be revised to include movement of labour. Until this is done, there is no provision for movement of labour amongst FICs. Individual FIC members, however, may have enabling environments for receiving labour from other countries based on their local immigration laws.

Trade in services agreement under PICTA could be a meaningful one for all members. Services have become the single largest sector in many developing countries. It is estimated that they amount to 45% of GDP in low-income countries, 55% of GDP in middle-income countries and 70% of GDP in high-income countries. The services sector contributes to two-thirds of world production, one-third of global employment and one-fifth of global trade. Demand for services is highly income elastic. An efficient services sector is crucial for the economy as well as for competitiveness. Nearly all Pacific island countries are facing the challenge of developing a wider range of employment opportunities and reducing dependence on low value-added agricultural exports. These two goals can be facilitated through an expansion of services output and services trade. In addition, export revenues from services tend to be less volatile than global commodity prices.

Similarly, the MSG has only restricted provisions. However, under the terms, trade in services and labour movement can be included. The agreement defines the term 'goods and services' as those specified in the schedule, including 'such other goods and services that may be included in the said Schedule 1 by mutual Agreement between the parties'. This means that the parties will have to agree to include trade in services and

labour movement specifically as coming within the ambit of the agreement. This can be done by including movement of labour in the schedule. However, adding new clauses in regional agreements is not always an easy task. There are many factors to be considered which have both local and global implications. In this respect, given that the EPAs are still under negotiation, the framework within which this negotiation occurs will define the scope for temporary labour movement.

Even in the WTO's General Agreement on Trade in Services (GATS) under Mode 4, which provides the framework within which any agreement on temporary movement of labour would be developed, there has been considerable international debate in terms of interpretation of its specific provisions. GATS divides trade in services into 4 modes of service supplies. Of these, the 4th mode concerns supply of services of a supplier of a member through the presence of natural persons in the territory of another member on a temporary basis. The provisions under Mode 4, however, are limited to provision of suppliers gaining entry for a specific purpose (e.g., to fulfil a service contract, either as self-employed or as an employee of a foreign service supplier). Furthermore, the supplier is confined to a defined sector vis-à-vis general labour movement. But underlying all these is that the movement of the supplier is temporary; the supplier is neither migrating on a permanent basis, nor seeking entry to the labour market in the host country.

Mode 4 is generally understood to include:

- a) business visitors: persons visiting the host country for the purpose of conducting or organising business, but who receive no remuneration in the host country
- b) intra-corporate transferees: existing employees transferred within the same foreign controlled company
- c) contractual service suppliers (employees of companies): persons providing services where a foreign company obtains a contract to supply services to a host country client and sends its employees to provide the services
- d) contractual service suppliers (individuals or independent service suppliers): an individual who wins a contract to supply services to a host country client.

Under Mode 4, the FICs' ability to supply labour services to the EU, given the current structural and institutional weaknesses of the FICs, may be a limiting factor. The outcomes of a recent regional workshop on "Towards a Trade and Development Approach to Temporary Movement of Persons (Mode 4)" highlighted the potential costs and benefits of temporary movement of labour and also recognised the efforts needed to facilitate increased access to labour markets.

As noted above, the current trade agreements for the FICs do not specifically address the details of how temporary (or otherwise) labour movement is to be treated. In such a situation, workers move away depending on the demand for their skills and the possibility of them being exhausted in the labour pool of the recipient countries, and this to the larger developed FICs or to Australia and New Zealand. Further, individual country migration rules and policies currently determine the scope and scale of labour movement within and outside the region. Nonetheless, some countries, for example Vanuatu and Fiji, have started negotiating temporary labour movement options. Recently, New Zealand has responded favourably to temporary employment in the horticulture sector from some of the FICs.

It is understood that the Forum Trade Ministers Meetings have emphasised, and will continue to emphasise, the progressive inclusion of trade in services dimensions as part of existing, and future, trade agreements concerning the FICs.

Labour movement in the Pacific

In the Pacific, labour movement has largely been from the FICs to the developed countries like Australia, New Zealand, the US, Canada and the UK. Movement within the FICs has been insignificant. In the more recent years of relative boom and slow to non-rising population in some countries, especially in the Cook Islands, the demand for workers outpaced supply, resulting in movement of labour from other FICs, notably Fiji, to the Cook Islands. Workers from small countries, like Tuvalu and Kiribati, have also found employment on ocean vessels registered in a wide range of countries. More recently, medical workers, especially nurses, and to some extent teachers, have moved within FICs.

Other than the above, however, there are no firm data suggesting any notable movement of workers within FICs. Most FICs do not collect and/or analyse and/or publish data on movement of people across the region:

if one were to make any robust conclusion on the state of labour movement within the FICs now, detailed data are necessary. However, some data do exist on movement of people into Fiji from FICs, and movement out of Fiji to the FICs, showing that on average, the arrivals and departures range to around 5% of all arrivals and departures to and from Fiji. In Samoa, the fastest growing FIC, data on work permits issued are not available. Data do show that movement of people into Samoa from other countries for 2005 for reasons other than travel and tourism amounted to 771 people (comprising 7.1% of all entrants) from the Pacific Islands (other than American Samoa).

Given the significance of movement of labour within and outside the region, it is vital that national statistical offices of FICs compile consistent data on movement of people. Towards this end, strengthening and standardising the questionnaire for reasons of arrival and reasons for departure from each country, in the respective country's arrival and departure forms would be a useful initiative for future research purposes.

An analytical framework

The Pacific region has relative diversity in terms of the key variables that can potentially contribute to temporary labour movement. A priori, diversity is extreme, though this is routinely overlooked in the usual stereotype of small island countries with limited resource base and a limited range of products. The region, for example, has both countries with a large land and natural resource base, and countries that are nothing more than coral growth above the ocean. It includes countries with very high literacy rates, and also those with very low literacy rates. In like manner, there are differentials in many other features that prove important in analysis of the costs and benefits of temporary labour migration.

For the economy as a whole, however, the issues become:

1. Outflow of Labour
 - a) Does any outflow of labour have a significant impact upon these variables?
 - b) If so, how does it have an impact—positively or negatively? More concretely, what are the quantifiable impacts of an outflow of labour on each of these variables?
2. Inflow of Labour
 - a) Does any inflow of labour have an impact upon these variables?
 - b) If so, how does it have an impact—positively or negatively? More concretely, what are the quantifiable impacts of an inflow of labour on each of these variables?

These questions can only be answered by economy wide models. The FIC policy makers, however, do not—except Fiji and Papua New Guinea, which have CGE models—have access to up-to-date economy wide models that incorporate pertinent macro and micro variables. In the absence of economy wide models, or in the absence of models that include all the relevant variables, effects of a few representative indicators are summarised in Table 3.

The extent to which these costs and benefits could be quantified, however, remains an issue. While there are strong possibilities of temporary labour movement creating costs and benefits for the sending and receiving countries, depending on the concrete situations in each sending and receiving country, normally such costs and benefits would be included in a comprehensive cost–benefit analysis, inclusive of the social dimensions.

However, we make some attempts to investigate the net benefits of temporary labour movement at micro level in some important sectors from Fiji to New Zealand (see Table 4). These computations are based purely on earning differentials. The three sectors investigated are agriculture (specifically fruit picking and/or packaging), transport and services, and building construction. We estimate the basic costs and benefits for these activities and the results suggest net benefits of labour movements in these activities—the highest being in transport and services, followed by construction.

In all activities, the net anticipated savings would account for more than half the incomes earned in Fiji and more importantly would be sufficient to support many months of basic sustenance in Fiji.

Of interest is the level of possible remittances that could be made to Fiji. Preliminary estimates suggest that remittances will be above NZ\$5000 in each sector under review. Therefore, there are likely benefits to be made in allowing temporary workers from Fiji to New Zealand.

Table 3 Possible costs and benefits of temporary labour movement

Factor	Benefits	Costs
Remittances	<ul style="list-style-type: none"> • Raises welfare of recipients through increased consumption. • Increased foreign exchange earnings for the country. • Complements domestic savings which becomes a potential source of investment funds. 	<ul style="list-style-type: none"> • Creates a dependency culture. • Distorts consumption patterns. • Lead to inflationary pressures and Dutch disease which has implications on the economy.
Health	<ul style="list-style-type: none"> • Exposure to a better system of hygiene in recipient country. 	<ul style="list-style-type: none"> • Potential loss of labor force in both through deaths or acute illness acquired through human contacts.
Consumer Standards	<ul style="list-style-type: none"> • Migrants returning with better appreciation of quality standards generate spill-over effects. • Raise expectations of consumer industry in receiving country. 	<ul style="list-style-type: none"> • Deepening of foreign consumption patterns, e.g the fast- and junk food culture in the FICs.
Social Integration	<ul style="list-style-type: none"> • Out-migration relieves competitive pressure on job market. • Helps to weaken political influence of the groups whose constituents are the out-migrants. • Inflow of people with different ethnic or communal identities could deflect existing socio-economic challenges such as inter-communal or inter-ethnic tensions. 	<ul style="list-style-type: none"> • In receiving country, migrants are generally seen as the source of conflict with local population. • Costs of putting in place institutions for preventing such conflicts.
Economic	<ul style="list-style-type: none"> • Has a direct effect on the size of labour force, unemployment rate, and wages in the both, receiving and sending countries. • In-migration reduces labor shortages. • Generates flow-on benefits by raising demand and stimulating economic activity. • Creates a tendency for equalization of wages across borders. • Complements skills in areas of shortage for receiving countries, while it benefits the sending countries by the inflow of increased skills and expertise of returning workers. • Out-movement is seen as reducing poverty - reducing the unemployed people, but also by reducing the proportion of people dependent on the employed. 	<ul style="list-style-type: none"> • Rise in wages of skilled workers in sending country due to reduced supply of workers causing tendencies for wage-push inflationary pressures. • Fall in wage rates in receiving country thereby adversely impacting the already employed workers. • Adjustment and adaptation costs of migrants. • For labor sending countries reduced competitiveness of industries from which workers move. • Pulling away labour from rural areas has impacts on production of agricultural output, although there may well be idle labour resources in areas due to limited access to productive land.
Fiscal Effects	<ul style="list-style-type: none"> • In receiving countries, increased state revenue through increased incomes generated by foreign workers. • Taxes to sending countries through multiplier effects of consumption and investment. 	<ul style="list-style-type: none"> • Foreign workers place pressure on state services such as infrastructure, social services, public goods and the environment.
Skills and Technology Transfer	<ul style="list-style-type: none"> • Out-migration is seen as a process that levels the accessibility of people to capital and modern technology. • Skill sets are enhanced through new methods and also appreciation of higher standards work ethics. Overtime, this should lead to productivity gains. 	<ul style="list-style-type: none"> • The possibility of introducing technology that may be inappropriate to the country's needs.
Political	<ul style="list-style-type: none"> • If, migrants strengthened universalistic values of human rights, then it could be a benefit to sending and receiving countries, there would be positive overall gains. 	<ul style="list-style-type: none"> • If migrants brought in anti-democratic values and norms of conduct, this would be a cost to the society, as will be the case if workers undermine human rights values.
Environmental	<ul style="list-style-type: none"> • For the sending country, the outflow of workers would reduce pressures on the environment, at the same time improve appreciation for sustainable management practices on return. 	<ul style="list-style-type: none"> • For a receiving country, in-migration would place pressure on the environment – like provisions for waste management, -water resources etc.

Table 4 A restrictive micro analysis of temporary movement of labour based on wage differentials

Sector	Estimated Relative Benefits of Temporary Employment in New Zealand for a period of six months (in \$NZ, unless stated)	Estimated Relative Costs of Temporary Employment in New Zealand for a period of six months (in \$NZ, unless stated)	Net Benefits
Agriculture Fruit Picking and Packing	<p>Estimated weekly earnings in horticulture = \$540</p> <p>Gross Earnings for six months = \$12960</p>	<p>Living costs in NZ = \$3941</p> <p>Travel costs (ret) = \$707</p> <p>Contingency = \$1260</p> <p>Family support = \$2315</p> <p>Family Contingencies = \$1260</p> <p>Income loss (in Fiji) = \$2000</p> <p>Total Costs = \$11484</p> <p>Gross Savings = \$1475</p> <p>Possible Remittances to Fiji in 6 months¹ (including family support and contingencies) = NZ\$5051</p>	Yes
Services and Transport	<p>Weekly Earnings in non-agriculture sector \$826</p> <p>Gross Earnings for six month = \$19824</p>	<p>Living costs in NZ = \$3941</p> <p>Travel costs (ret) = \$707</p> <p>Contingency = \$1260</p> <p>Family support = \$2315</p> <p>Family Contingencies = \$1260</p> <p>Income loss (in Fiji) = \$2413</p> <p>Total Costs = \$11876</p> <p>Savings = \$7948</p> <p>Possible Remittances to Fiji in 6 months (including family support and contingencies) = NZ\$11523</p>	Yes
Building and Construction Activities	<p>Earnings in manufacturing sector \$720</p> <p>Gross Earnings for six month = \$17280</p>	<p>Living costs in NZ = \$3941</p> <p>Travel costs (ret) = \$707</p> <p>Contingency = \$1260</p> <p>Family support = \$2315</p> <p>Family Contingencies = \$1260</p> <p>Income loss (in Fiji) = \$2835</p> <p>Total Costs = \$12319</p> <p>Gross Savings = \$8536</p> <p>Possible Remittances to Fiji in 6 months (including family support and contingencies) = \$12111</p>	Yes

Source: Authors' computations based on data from the ILO website, Fiji Bureau of Statistics (2006)

Notes for Table 4

1. Generally workers from the FICs are employed in two main areas: fruit picking and fruit packing units at most of the orchards. On average, by top range industry rate, workers are get paid around NZ\$30 to NZ\$40 per bin such as with Mr. Apple's Hawkes Bay. The rate varies depending on the variety of Apple picked which would require varying level of care and concentration. The packing job is paid at an average hourly rate of NZ\$11.00. For fruit picking, the current output from most islanders is around 3-4 bins per day which fetches about NZ\$90.00 – NZ\$120.00 daily depending on their individual hard work and effort. Each bin when filled can carry around 500 Kilos of apple.
2. Due to lack of data we have used non-agriculture earning and manufacturing earning as a proxy for average earnings in services and building sectors in New Zealand. Data obtained from the ILO website: <http://laborstata.ilo.org/>
3. We exclude the effects of taxes in our computations as these are mostly seasonal and basic activities. However, if a provisional tax is charged, the results will not be much different because these incomes falls well below annual chargeable incomes and thus tax can be claimed. However, generally agricultural workers at farm level do not pay taxes.
4. Estimates of the weekly living costs are based on those suggested by <http://www.emigratenz.org/cost-of-living-in-new-zealand.HTML> for a modest family of 4 living in sub-urban centre in New Zealand. It is assumed that workers share rental costs in New Zealand but have own houses in Fiji. Further, we have added 20% extra cost of living to building construction and transport sectors because these workers will be closer to the high cost areas. The information on www.dol.govt.nz site indicates that employers also share costs up to a capped figure of NZ\$3000 per annum. However it is not known if the same cost sharing formula is applied to all workers across the board and thus it is hard to verify its effects in the above framework. Nonetheless any cost sharing initiatives will increase saving for the workers and therefore the pro-rated capped figure for six months is used in computing the savings above. The spot exchange rate of FJ\$1.20 per \$1NZ is used.
5. Air New Zealand Smart Saver fare (F\$350 one way including surcharges) is taken allowing 10% extra unannounced rate changes. \$100 one-way extra is allowed for in land fares. The exchange rate is FJ\$1.20 per \$1NZ.
6. Family support is based on the basic food requirement expenditure in Fiji (\$35 per adult/week), see Narsey (2007). The above calculations assume a 4 member (adult) family with one of the adults working in New Zealand as a seasonal worker.
7. Spot NZD/FJD exchange rate of 0.8078 applied where necessary. A 5% inflation is added on all domestic and foreign costs of living and expenditure.

Similar computations can be made for other FICs. Using data from an UNCTAD/ Commonwealth Secretariat study, we approximate that unskilled and semi-skilled workers from Papua New Guinea and Solomon Islands will benefit as follows (Table 4.1). These figures are computed for a six-month period using a similar methodology to that in Table 4.

Table 4.1 Benefits to other island states (NZ\$)

Benefits	Agriculture	Transport/ Services	Building & Construction
Papua New Guinea			
Savings brought back	\$1,481	\$6,129	\$4,327
Total Remittances	\$4,373	\$9,022	\$7,219
Solomon Islands			
Savings brought back	\$1,398	\$5,943	\$4,137
Total Remittances	\$4,291	\$8,836	\$7,030

On a net basis, workers in all the three sectors would benefit at varying rates. Their accumulated savings brought back are almost three times higher than domestic savings. It is estimated that remittances would be around NZ\$4500–\$9500 per worker in agriculture, transport and construction sectors in both the countries. The remittances would be able to cover many months of basic sustenance. Using this approach, workers from other FICs may be able to benefit from seasonal work abroad, particularly if air transportation costs from FICs are more competitively priced.

Other findings – macro level

The World Bank estimates that unrestricted labour mobility at the global level could double global GDP. Even taking practical and political considerations around labour mobility into account, practically achievable global welfare benefits may be around three times total current global development assistance. For example, Winters examined the global effect of feasible temporary labour mobility, disaggregating the likely benefits, in terms of both how the global benefits would be split between countries, and the relative effects of skilled and unskilled labour movement. He found that ‘gains are shared between developing and developed countries and owe more to unskilled than to skilled labour mobility’ (Winters 2002:14).

In particular, Winters estimated that if developed countries opened up their labour markets to the extent of allowing temporary migrants to expand domestic labour forces by 3%, the permanent residents of those developed countries would benefit to the tune of a significant US\$6,860 million per year. The benefits to the developing countries as a result of unskilled labour mobility of this degree are appreciably more substantial. Winters estimated that they would benefit to the degree of something around US\$50,000 million, per annum.

Walmsley, Ahmed and Parsons (2005) took this disaggregation one step further and looked at the probable impact should Australia and New Zealand open up temporary access to their labour markets for unskilled workers from the Pacific, to the equivalent of just 1% of their (Australia’s and New Zealand’s) labour forces. They estimated that the likely benefits to Australia would be in the region of US\$200 million per year, and that the FICs would benefit by around US\$900 million.

Luthria et al. (2006) noted that unskilled agricultural workers from the Pacific could achieve significant increases in their annual income by working overseas for even a few months of each year. For example:

- the minimum wage for unskilled adult workers in Papua New Guinea as of 2005 is 150 Kina (US\$52) per month
- the minimum wage in Vanuatu is 20,000 Vatu (US\$186) per month, raised in September 2005 from 16,000 Vatu (US\$149) per month
- the daily mean wage for agricultural workers in Fiji, according to the latest available figures, was FJD\$16.77 (US\$9.50) in 1999.

Luthria et al. (2006) noted that this compares to the award rate of AUD\$15.38 (US\$11.38) per hour as applicable in Australia under the federal horticultural award as at July 2005—with just a few days’ work in Australia, workers could gross the equivalent of their entire monthly income.

MacLellan and Mares (2005) note that an increase in remittances from greater labour mobility is an important way of boosting foreign reserves and addressing balance of payments gaps between Australia, New Zealand and Pacific island neighbours.

Thus, macroeconomic theory and empirical evidence suggest that allowing temporary movement of unskilled labour from the FICs to larger markets such as those under EPA, PACER, PICTA and MSG would be of benefit to both the developed and developing economies of the region. In particular, it looks as though it would be of huge benefit to the Island nations—countries with many fewer options for economic development than the larger countries in the region.

The limitations on other options for economic development in the Pacific islands must also be emphasised. It has been suggested that instead of encouraging people to move to where the jobs are, FIC governments should concentrate on bringing jobs to their people. In trade terms, FICs should aim to attract capital and other factors of production to their countries, rather than trading their labour into overseas labour markets.

There is undoubtedly significant potential for job creation through improving the investment climate of the island countries of the Pacific, and any route to doing so should be prioritised by the FICs. However, the World Bank (Luthria et al. 2006) and others suggest that intrinsic cost disadvantages the FICs face mean that encouraging job creation domestically is unlikely to be sufficient to meet demand for employment.

Facilitation of temporary movement of labour

In looking forward in terms of labour mobility issues, a recent regional workshop organised by the Pacific Islands Forum Secretariat (PIFS) recognised that governments now had a major responsibility to put in place policies at the national and regional level directed at getting the most out of existing and potential future opportunities for temporary movement of labour. These issues reinforce the background discussions in the earlier sections of this report, and recognise that there are certain institutional factors that need to be addressed, to help with sustainable schemes. In this regard, facilitative measures, and those also recommended by the regional workshop (PIFS 2007) include:

I. Facilitating Market Access

- That FICs continue to pursue their objective of achieving an EPA that enhances their integration into the global economy and meets their development needs. This includes the specific objectives of securing market access for temporary workers in sectors of interest, in sufficient numbers, and for sufficient durations of time.
- That FICs continue to pursue liberalisation among themselves for high-skilled and semi-skilled workers, through PICTA.
- That FICs seek to address temporary movement concerns within the context of potential services negotiations under PACER and beyond, bilateral agreements in different sectors (e.g. nurses in Canada), and the WTO Doha Work Programme.
- That FICs seek mutual recognition agreements and arrangements, and linkages with training institutions in other markets.

II. Addressing Supply Constraints

- That FICs upgrade their educational institutions, to equip themselves to take advantage of the growing opportunities available in the global market for temporary workers. This will include:
 - The need to review and assess the current supply of skills, and to put in place policies that ensure that countries maintain the adequate levels of supply of workers for both the domestic and international markets.
 - That FICs look into the regionalisation and harmonisation of standards and accreditation systems, and potentially also training institutions.

III. Minimising Social costs of Temporary Movement

- Schemes and arrangements be negotiated and designed in such a way as to minimise the social costs for workers and their families of temporary movement. Here, measures may include:
 - looking into schemes for repatriation, pastoral care and counselling services to ease the transition and return of nationals
 - managing the outflow of workers to minimise costs, through such means as the use of quotas, duration of temporary access, and measures ensuring that workers return
 - instituting support mechanisms for temporary workers' family members left to cope in sending countries during their absence.

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IV. Maximising Benefits of Temporary Movement

- That FICs take facilitative measures to maximise benefits of market access, such as:
 - targeting the low-skilled and unemployed
 - encouraging the exploration of innovative ways to use remittances productively
 - putting in place measures to lower associated costs, including airfares, remittances and the costs of communication.

More so, to evaluate the impact of temporary labour movement in both the sending countries and the receiving countries, there is a need for collecting appropriate data on movement of labour. The statistical foundation of all FICs would need to be empowered to put in place the most efficient collection and analysis of data pertinent to temporary labour movement.

In addition, there is a body of literature requesting practical pilot schemes that will allow for better assessment of impacts at the macro and micro levels. For instance, Luthria et al. (2006) and Maclellan and Mares (2005) note that the starting point should be a series of small-scale pilot projects. The evaluation of such pilot projects would assist in determining whether an ongoing overseas seasonal workers scheme is feasible and desirable. If such trials proved successful, they could provide the basis for developing a realistic model for the administration, cost sharing and regulation of any such scheme in the longer term. They go further to suggest that the potential problems associated with seasonal labour programs can then be overcome or at least minimised with well informed design and management.

Luthria et al. (2006) go further to recognise the need for shaping the design of pilot schemes bearing in mind such factors as choice of suitable workers; circular movement of workers; cost sharing of travel related costs with employers; and commercial viability.

New Zealand's recently introduced Recognised Seasonal Employer (RSE) scheme provides a basis for better assessment of the social and economic costs and benefits from temporary movement of labour. In addition, the pilot scheme for Ni-Vanuatu workers (facilitated by the World Bank) also provides an empirical basis for measuring costs and benefits of seasonal worker schemes.

Conclusions

While standard economic theory holds that there are net gains from labour movement, the specific situation of each country needs to be analysed to come to concrete conclusions on gains and losses of temporary labour migration in the FICs and the region as a whole.

Growth in national incomes resulting from labour mobility, both in the sending and the receiving countries, is a strong motivation for encouraging temporary labour movement. The projections on labour market conditions—with shortages in some countries and surpluses in others—show that temporary labour movement would tend to utilise the excess supply of workers in FICs.

Having observed the above issues in economic literature and perused some examples of costs of benefits, we have reached the general conclusion that temporary labour movement out of the FICs and indeed movement within the region could have beneficial impacts at both the micro and macro levels. While there are possible costs of temporary movement of labour, the overall benefits in terms of remittance income could outweigh them. Other unquantifiable costs and benefits have been identified in this study, which may need further analysis. However, in their general direction, observations in this study are similar to the conclusions reached by the World Bank study (Luthria et al. 2006).

The following key issues emerge from this study:

1. Given the projections on labour supply and the targets for economic growth rates in the FICs, there is reason to believe that labour shortages will develop in some of the FICs. An opportunity to address potential labour shortages, as well as improve the efficiencies in the functioning of labour markets in each FIC, is to allow freer movement of people within the region.
2. While economic theory suggests that there are significant gains to be derived for each country out of freeing movement of labour across boundaries, each FIC is *sui generis* in terms of its resource endowments. Individual member countries in the region each have unique institutional, economic, social, political and legislative foundations. Given this, the necessity is for detailed analysis, on the basis of robust data, of the costs and benefits of temporary labour migration for each country.
3. Brief wage differential analysis implies that temporary labour movement will be beneficial at the household level. On a net basis, workers in the transport and services, agriculture and building and construction sectors have a huge potential to maximise their incomes and welfare. These findings also are consistent with the detailed work done by Luthria et al. (2006).
4. Practical pilot schemes for movement of workers provide a solid basis for empirical assessment of impacts

at the macro and micro levels. In this regard, the findings of the Recognised Seasonal Employer Scheme by New Zealand and the World Bank facilitated pilot scheme in New Zealand will provide empirical evidence for improving the policy and facilitation framework for future up-scaled efforts.

5. The current trade agreements do not have adequate details on the modalities of trade in labour services, as these are still being negotiated. A development approach needs to be adopted in the review of trade agreements in light of the growing FIC need to address temporary movement of labour.
6. There is an urgent need for the development of a framework for data compilation on movement of people within the region.
7. Governments have a major responsibility to put in place policies at the national and regional levels directed at getting the most out of existing and potential future opportunities for temporary movement of labour. This need was also highlighted at the recently completed regional workshop on Temporary Movement of Persons.

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Appendix 1: Brief Notes on Trade Agreements

The PACER is an economic and trade cooperation agreement between the 14 FICs who are members of the Forum (Pacific Islands Forum Secretariat), and Australia and New Zealand. Endorsed by the Forum in 2001, PACER is described by the Forum (on its website) as a framework agreement setting out the basis for the future development of trade relations among all 16 Forum members, including Australia and New Zealand. It hopes to provide for free trade to be established gradually among Forum members. Under its provisions, the FICs may establish a free trade area among themselves and Australia and New Zealand. PACER contains a number of provisions relating to the timing of negotiation for free trade between Australia and New Zealand. These provisions are designed to assure Australia and New Zealand that they will not be disadvantaged relative to other trading partners in their trade relations with the FICs. PACER also provides for negotiation on the establishment of other elements of a single regional market. The PACER also provides for establishment of a program of

trade facilitation measures, designed primarily to benefit the FICs. It contains requirements for the provision by Australia and New Zealand of financial and technical assistance, for the development and implementation of the trade facilitation programs. It also provides for annual reviews of the operation of the Agreement, and all aspects of trade and economic cooperation among the parties. General reviews of the PACER are to be carried out at three-yearly intervals.

PICTA, on the other hand, is an agreement between the 14 FICs that aims to ‘strengthen, expand and diversify trade’ between the member states through eliminating tariff and non-tariff barriers to trade between the parties in a gradual and progressive manner’. The objective is the ‘eventual creation of a single regional market amongst the Pacific Island economies’.

The MSG Trade Agreement (MSGTA) is an agreement amongst the four Melanesian states of Papua New Guinea, Vanuatu, Solomon Islands and Fiji. It was signed as an agreement amongst the first three listed countries in 1993; Fiji joined the team recently. The objective of the agreement is to promote and facilitate the ‘free flow of identified goods and services’, to ensure as far as possible that trade between the parties takes place under conditions of fair competition, and to contribute to the harmonious development and expansion of world trade and for progressive removal of barriers (Article 3). The Agreement is approved and accorded recognition by the WTO Committee on Regional Arrangements as one that is compatible with and meets the requirements of Article 24 of the GATT/WTO Agreement.

The EPAs aim to provide equal partnership in development between the EU and the FICs. They are expected to conform to the WTO rules. Negotiations are currently underway for EPAs between the EU and the FICs, and are scheduled to be completed by the end of 2007. Some critiques of these agreements can be found in Narsey (2004).



**Regional Symposium on Population and Development
in the Pacific Islands: *Accelerating the ICPD Program of Action***
[The University of the South Pacific, Suva, Fiji. 23-25 November, 2009]

Monday 23 November

8.00 – 9.00 Registration

9.00 - 9.15 Chair: Professor Biman Prasad (Dean of Faculty of Business and Economics)
Welcome by USP Vice Chancellor (Professor Rajesh Chandra)

9.15 – 9.45 *Opening Statement by UNFPA APRO Regional Director(Ms Nobuko Horibe)*

Plenary 1 *Overview of population and development globally, ICPD@ 15*

9.45-10.30 Keynote address: Dr Wasim Zaman (Director)
Chair: Professor Wadan Narsey (School of Economics, USP)

10.30 – 11.00 Morning tea

Plenary 2 *Changing age structures, labour markets, public finance and poverty*

11.00 – 11.45 Keynote address: Professor Wadan Narsey (USP)
Chair: Professor Biman Prasad (Dean, Faculty of Business and Economics)

11.45 – 12.30 Panel: Denton Rarawa (Governor, CBSI); Odo Tevi (Governor, RBV);

12.30 – 1.30 Lunch

Plenary 3 *The aging population in PICs and implications for public policy*

1.30 – 2.15 Keynote address: Dr Geoffrey Hayes
Chair: Dr Wasim Zaman

2.15 – 3.00 Panel: Sefuiva Reupena (GS, Samoa); Vasemaca Lewai (FIBoS);
Dharma Chandra (USP); D Wesumperuma (HelpAge International).

3.00 – 3.30 Afternoon tea

Plenary 4 *Universal Access to Reproductive Health: The Case for Family Planning*

3.30 – 4.15 Keynote address: Dr Annette Sachs Robertson
Chair: Dr Salesi Katoanga

4.15- 5.00 Panel: Judith Seke(Sol.Is.); Sean Mackesy-Buckley (Family Planning, NZ);
Len Tarivonda (Vanuatu); Sela Paasi (Tonga)

6.30 – 8.30 *Pool-side cocktail and dinner (Holiday Inn) and launch of 2 publications*

Pacific ICPD + 15 (Geoffrey Hayes)
A Measure of the Future (Family Planning International)

Tuesday 24 November**Plenary 5 *Mortality, morbidity, obesity, and nutrition***

8.30 – 9.15 Keynote address: Dr Richard Taylor (Professor, UNSW)

Chair: Dr Kesaia Seniloli (Population Program, SOE, USP)

9.15 – 10.15 Panel: Dr Jimaima Schultz (FFNC); Father Fran Hezel; Dr Joel Negin (FSM); Jeremy Dorovolomo (USP);

10.15 – 10.30 Morning tea

Plenary 6 *STIs, HIV/AIDS and youth in the Pacific*

10.30- 11.15 Keynote address: Dr Nii K Plange (AusAID PNG)

Chair: Dr Wame Baravilala (UNFPA)

11.15 – 12.00 Panel: Dr Dennie Iniakwala (SPC); Dr Mili Kaitani (USP); Tim Sladden (UNFPA); Litiana Kurudrani (FSM); Steven Vete (UNAIDS APLF);

12.00 – 1.00 Lunch

Plenary 7 *Violence against women: development challenge for PICs*

1.00 - 1.45 Keynote address: Dr Janet Fanslow

Chair: Dr Judith Robinson (AusAID)

1.45 – 2.45 Panel: Dame Carol Kidu; Shamima Ali (WCC, Fiji); Maere Tekanene (Kir); Imrana Jalal (RRRT, SPC).

2.45- 3.15 Afternoon tea

Plenary 8 *Data issues: surveys, censuses, and institutional initiatives*

3.15 – 4.00 Keynote address: Dr Gerald Haberkorn and Arthur Jorari (SPC)

Chair: Mr Iosefa Maiava (UNESCAP)

4.00 – 5.00 Panel: Simil Johnson (GS, Van); Serevi Baledrokadroka (GS, Fiji); Carl Hacker (RMI); Dr Will Parks (UNICEF); Prof. Ian Rouse (Dean, FSM)

Break for the day

Wednesday 25 November**Plenary 9 *Urbanisation: fertility, housing, education, health, environment.***

8.30 – 9.15 Keynote address: Professor John Connell

Chair: Professor John Campbell

9.15 – 10.15 Panel: Elena Butuna (PNG); Fr Kevin Barr (ECREA);
Adrian Rajalingam (Deputy GS, FIBoS); Dharma Chandra (USP).

10.15 – 10.45 Morning tea

Plenary 10 *Climate change and population displacement*

10.45- 11.30 Keynote address: Professor John Campbell

Chair: Professor John Connell

11.30 - 12.30 Panel: Siliga Kofe (UNESCAP); Eduard Jongstra (UNFPA); Professor Patrick Nunn (USP)

12.30- 1.30 Lunch**Plenary 11 *Trade negotiations (PICTA, PACER Plus), labour mobility and PIC development***

1.30 – 2.00 Keynote address: Professor Wadan Narsey

Chair: Professor Biman Prasad

2.00 – 3.00 Panel: Maureen Penjueli (PANG); Nic McLellan (researcher); Mr Jai Kumar (USP).

3.00 -3.30 Afternoon tea**3.30- 4.45 Closing statements**

Dr Annette Sachs Robertson

Professor Biman Prasad

4.45 – 6.00 Farewell cocktail***Safe journey home***